GREAT LAKES WATER QUALITY AND RESTORATION EFFORTS

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BEFORE THE

SUBCOMMITTEE ON
WATER RESOURCES AND ENVIRONMENT

OF THE

COMMITTEE ON
TRANSPORTATION AND
INFRASTRUCTURE
HOUSE OF REPRESENTATIVES

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GREAT LAKES WATER QUALITY AND RESTORATION EFFORTS

THURSDAY, MAY 20, 2004

HOUSE OF REPRESENTATIVES, COMMITTEE ON TRANSPORTATION AND INFRASTRUCTURE, SUBCOMMITTEE ON WATER RESOURCES AND ENVIRONMENT, WASHINGTON, D.C.

The subcommittee met, pursuant to call, at 10:00 a.m. in room 2167, Rayburn House Office Building, Hon. John J. Duncan, Jr. [chairman of the subcommittee] presiding.

Mr. DUNCAN. I want to call the subcommittee to order. The President is still speaking to the Republican conference. I just left there, and I think the Democrat's conference is just breaking up, so other members will be coming in. I don't think the President is coming over to the Democratic caucus this morning.

[Laughter.]

Mr. DUNCAN. But at any rate, other members will be coming in shortly.

I want to welcome everyone to our hearing on the Great Lakes Water Quality and Restoration Efforts. We are conducting this hearing in two parts. Today we will hear from the Federal agencies that have programs that support efforts to improve Great Lakes water quality and restore the ecosystem of the Great Lakes Basin.

Tomorrow we will hear from members of Congress and representatives of the International Joint Commission, the Great Lakes Governors, the General Accounting Office and the scientific community.

Obviously the Great Lakes are a high priority for members from Minnesota, Wisconsin, Michigan, Illinois, Indiana, Ohio, Pennsylvania and New York, particularly in districts that border the Lakes. But the health of the Great Lakes ecosystem also has national significance. In fact, the President's new Executive Order on the Great Lakes declares that the Great Lakes are a national treasure.

By surface area, the Great Lakes are the world's largest body of fresh water, holding 6 quadrillion gallons of water, almost too many for any of us to really comprehend. That is enough water to cover the entire continental U.S. with 10 feet of water.

This resource helps support $200 billion a year in economic activity in the Great Lakes Basin, including 50 percent of the U.S. manufacturing output, 30 percent of U.S. agricultural sales, water supply for 30 million people, transportation of 50 million tons of waterborne cargo, half of which is exported overseas, a $4.5 billion commercial and sport fishery, $2.6 billion hunting season with 5.5 million hunters, and 50 million annual park visitors.

However, human activity has had a negative impact on the Great Lakes. While the Great Lakes generally can be used safely for swimming, recreation and as a source of drinking water, the Lakes do not fully support aquatic life, and it is not always safe to eat the fish caught in the Great Lakes. These water quality problems have a variety of causes. Part of the problem is from ongoing wastewater discharges, urban and agricultural runoff and air pollution, the same problems faced by lakes, rivers and bays all over the country.

The Great Lakes also present a unique environmental challenge. Because they are nearly enclosed water bodies, toxic substances have concentrated in these Lakes, sinking to the bottom and contaminating lake sediments.

Four of the five Great Lakes form a boundary between Canada and the U.S., so any efforts to restore the Great Lakes must be bi-national. This is the way the U.S. and Canada have dealt with Great Lakes issues since the Boundary Waters Treaty of 1909.

The current bi-national structure for restoring the Great Lakes ecosystem is the Great Lakes Water Quality Agreement. Under this agreement, the U.S. and Canada have developed lakewide management plans and remedial action plans for specific geographic areas. Unfortunately, all five lakes and all but two identified areas of concern remain impaired. In 2002, this Committee moved legislation introduced by Congressman Ehlers, the Great Lakes Legacy Act, to help jump start remediation of contaminated sediments in the Great Lakes. President Bush signed this legislation into law in November of 2002.

The Legacy Act is not intended to be the only tool for addressing ecosystem restoration in the Great Lakes. It is aimed specifically at the problem of contaminated Lake sediments. For the other problems facing the Great Lakes, we have a great many national programs that can help. For example, the need for wastewater infrastructure upgrades and pollution from urban and agricultural runoff are national problems. Federal assistance is provided to States to help address these issues.

Our Federal programs to address wastewater infrastructure and non-point source pollution did not give priority to the Great Lakes States when allocating funding, and I'm not suggesting that they should. Every region of the country has water pollution problems. But it is within the power of the Great Lakes states to give the Great Lakes priority when deciding how to spend this money.

I hope that today we'll get a better understanding of how programs and resources are being used to help improved Great Lakes water quality and help restore the Great Lakes ecosystem and who makes the decisions to prioritize and fund particular projects within the Great Lakes. I'm also very interested to hear how the Federal agencies intend to implement the President's new Executive Order. This Executive Order is an important first step toward using resources more efficiently and ensuring restoration activities and actions are actually implemented.

I would now like to recognize the Ranking Member, Mr. Costello, for any remarks he wishes to make.

Mr. COSTELLO. Mr. Chairman, thank you.

Mr. Chairman, I have a lengthy statement that I will enter into the record at this time.

Mr. Chairman, let me thank you for calling the series of hearings on the Great Lakes water quality and restoration efforts in the basin. This Subcommittee has had a long history of oversight on the ecological and environmental health of the Great Lakes. We've held numerous hearings on the subject. Today we again, as you noted in your opening statement, focus on the continuing sources of pollution and contamination of the lakes, as well as the Federal, State and local efforts to restore and protect this vital natural resource.

I am concerned, Mr. Chairman, that after almost 20 years of effort on the part of many to address the human and environmental health concerns associated with the lakes, and numerous studies that have been done by the Federal Government, that little progress has been made. I was pleased to see the President sign the Executive Order calling for increased collaboration between the Federal, State and local agencies and organizations involved to improve the overall health of the Great Lakes.

There is no question that the Administrator of the EPA, when he was in Chicago earlier this week to make the announcement on behalf of the President, he noted that there are 10 Federal agencies, 8 States, half a dozen major metropolitan areas and various county and local governments, not to mention Canada, all have a hand in governing the Great Lakes. So there is no question that there needs to be collaboration and coordination. I want to make mention of the President's Executive Order.

However, I think we all are aware that in order to address the challenges presented to us by the Great Lakes, it's going to take a commitment on behalf of the Administration and Congress to provide the funds. It will take a substantial amount of funds to address these problems and I hope that both the Administration and the Congress is prepared to address the funding issues.

I want to commend Chicago Mayor Daley for his efforts and also Governor Taft from Ohio. They both are leaders in the effort to address the problems associated with the Great Lakes. Again, Mr. Chairman, I thank you for calling this series of hearings, and I will look forward to hearing from out witnesses today.

Mr. DUNCAN. Thank you very much. Mr. Davis.

Mr. DAVIS. I'll pass, Mr. Chairman, thank you.

Mr. DUNCAN. Thank you very much.

I want to welcome once again the witnesses, who have taken time out from their busy schedules to be with us. Here representing the Environmental Protection Agency is Mr. Thomas V. Skinner, the Manager of the Great Lakes National Program Office here in Washington. Representing the U.S. Army Corps of Engineers is Mr. Gerald W. Barnes, Director of Programs for the Great Lakes and Ohio River Division from St. Louis. Representing the National Oceanic and Atmospheric Administration is Dr. Stephen B. Brandt, the Director of the Great Lakes Environmental Research Laboratory of Ann Arbor, Michigan. Representing the U.S. Department of Agriculture is Dr. R. Mack Gray, Deputy Under Secretary for Natural Resources and Environment, from here in Washington. And representing the Department of Interior is Ms. Robyn Thorson, Re-

gional Director of the U.S. Fish and Wildlife Service's Midwest Region, from the Twin Cities of Minnesota.

We thank each of you for coming, especially those who had to come long distances. Before I go to the witnesses, though, we always are honored by the presence of the Ranking Democratic member of the Committee, a man for whom we all have the greatest respect, Mr. Oberstar. I know he hasn't even had a chance really to catch his breath, but if you would like to give a statement, we would appreciate hearing any comments that you have at this time.

Mr. OBERSTAR. Thank you very much, Mr. Chairman, for your kind remarks. I greatly appreciate your scheduling these hearings and the work that you and Ranking Member Costello have put into the preparation for these hearings. In your ever thoughtful judicious manner, you proceeded on a subject of very, very great importance, the condition of the Great Lakes, a subject that has been of interest to and a subject of hearings in this Subcommittee for as long as it has existed, since the time it was known as the Rivers and Harbors Subcommittee.

The Great Lakes are not just a wonderful water resources, they are the fourth sea coast. They represent one fifth of all the fresh water on the Earth. They are home to 35 million Americans. They are, as the fourth sea coast, the point of entry and exit for something like 30 percent of the Nation's agricultural commodities, are all of the iron ore produced in the United States for the lower lakes steel mills, for limestone and gravel shipments for our highway and bridge programs, and for shipment of coal from the great western States, low sulphur deposits in the Powder River basin to fuel Consolidated Edison in Chicago, for upper Illinois and Detroit Edison and many others.

This extraordinary resource, of which there is only a counterpart in Russia in Lake Baikal, deeper than Lake Superior, greater volume, but smaller surface area, matters that we should be very careful about. The United States and Canada signed the Boundary Waters Treaty of 1909, and have jointly undertaken to manage this resources. They've signed the Great Lakes-St. Lawrence Seaway system and manage it jointly on each side of the border. They have signed the Great Lakes Water Quality Agreement, the Great Lakes Air Quality Agreement and as chair of the Investigations and Oversight Subcommittee many years ago, I held extensive hearings on the status of those agreements and of our cleanup efforts.

It's been mentioned so often, I hesitate to say it once again, but there was a time when the Cuyahoga River emptying into Lake Erie caught on fire, when people turned their faucets on in the Great Lakes Basin and got suds out of the faucet. When great mounds of suds floated down the Ohio River system, emptying into the Mississippi, it galvanized people into action to strengthen our Clean Water Act and take action against the discharges.

It was in that same period in the late 1960's that Lake Erie was pronounced dead, that it was impossible to bring this lake back. Well, Lake Erie is back, the fishery resources back. We will forever have to contain, however, the lamprey eel, we will forever have to be vigilant against invasive species that enter the Great Lakes in ballast water from foreign vessels coming through the St. Lawrence Seaway. We will forever have to be vigilant about non-point source,

which is runoff from open land whether for highway and shopping center and home development construction or agricultural activities or forestry. We have to attack this new frontier of discharges into the lakes.

In 1988, April 14, I opened our Committee hearings with this statement. "Clearly the battle to clean up the Great Lakes is not going well. Just as we made progress in restoring oxygen levels to the Great Lakes and cleaning up one type of pollution, we found that another was present, and maybe that it was there all along. When we cleaned up the biological oxygen demand issue, we exposed other problems: toxics, cancers and tumors. The fish are now back, but they're back with tumors, we find birds with crossed beaks, deformed limbs, eggs that don't hatch, all signs that the Great Lakes are not well.

And what are the implications for our world? Are these birds and fish merely isolated phenomenon? Are they irrelevant curiosities to be shown only at public meetings and hearings, the bloody shirt to frighten people into unwarranted and premature action? Or are they in fact a distant warning signal that the sinister effect of substances which are lodged in increasing numbers in our own body, accumulating over a much longer lifetime, passed from one generation to the next, from mother to child?"

And in the course of those hearings, Dr. Whalen Swain, a researcher from the University of Michigan, testified that tests he conducted on his 16 year old daughter demonstrating the level of PCB in her body fat would pass from her progeny only after six generations if there were no more PCBs introduced into their life chain. That is not a legacy for the future. We have not made sufficient progress in attacking the problems, cleanup of toxic hot spots. We know that if you live within 20 miles of one of the Great Lakes, you are still under a fish advisory. If you eat fish once a week, you probably have 440 parts per billion PCBs in your body. If you live anywhere else in America, it's only five parts per billion.

We need to continue to focus the bright spotlight of public concerns, the hearing process, Mr. Chairman, which I greatly appreciate your undertaking to do. We now need to not only focus that spotlight but take action on the steps we know need to be at hand, cleaning up those harbors of concern, 26 of which are wholly within the United States, 12 are in Canada, and 5 shared by both countries. Canada has made a lot of progress already in cleaning up on their side of the lake. We've got to do better. Two of those Canadian sites have been remediated and delisted. We've not done proportionally as well in the United States.

This hearing, I hope, will be the clarion call to resume action. Regrettably, the Administration's budget cuts $178 million from programs that would be directed to lake cleanup actions. And we should be restoring those funds in the current budgets. Surely if we have money to pour $5 billion in water and sewer resources for Iraq, we could have $178 million for the greatest body of fresh water in the world, the Great Lakes.

I thank you very much, Mr. Chairman. Thank you, Mr. Costello.

Mr. DUNCAN. Thank you, Mr. Oberstar.

I have introduced all of the witnesses. We always proceed in the order the witnesses are listed on the call of the hearing. Your full

statements will be placed in the record, so you can either read your statements or summarize them.

In all other subcommittees and committees, we ask the witnesses to limit their statements to five minutes. In this subcommittee, we give you six minutes, but we'll stop you after six minutes, as a common courtesy to the other witnesses.

Mr. Skinner, you may proceed first.

TESTIMONY OF THOMAS V. SKINNER, MANAGER, GREAT LAKES NATIONAL PROGRAM OFFICE, U.S. ENVIRONMENTAL PROTECTION ADMINISTRATION

Mr. SKINNER. Good morning, Mr. Chairman, members of the Committee, including some old friends. Thank you for the extra minute. I'll try not to take it this morning.

It's an honor to appear before you this morning to discuss some of our efforts at EPA and within the Administration with regard to the Great Lakes, in particular two major steps that were announced earlier this week, the Executive Order on the Great Lakes signed by President Bush and the regional collaboration of national significance that Administrator Leavitt, along with Governor Taft and Mayor Daley announced in Chicago on Tuesday.

As you know, the Great Lakes hold 20 percent of the world's surface fresh water. They're in the middle of one of the world's most productive agricultural areas, commercial ships from all over the world ply their waters. They're used for recreation, including boating, fishing and swimming, as you pointed out, Mr. Chairman. More than one-tenth of the U.S. population and one-quarter of the population of Canada call the Great Lakes Basin home. The Great Lakes touch an incredible number of this Nation's citizens.

As a result of all of those factors, the Great Lakes are faced with a myriad of problems from invasive species to wastewater discharges, they go on and on. Solving each of these problems would be complex even for a single entity. But the Great Lakes border eight States, two countries and many, many communities. Local, Tribal, State, Provincial and Federal Governments in the U.S. and Canada share responsibility for regulating the lakes. Numerous non-governmental organizations also play important roles in Great Lakes research and program implementation.

Over the past 25 years, at every level of Government, programs have been created to care for the Great Lakes. In the Federal Government alone, there are approximately 140 programs. As recently as last week, the Great Lakes Governors announced and outlined their priorities in a letter to the House and Senate Appropriations Chairmen and Ranking Members. Some have called for an orchestra leader for the Great Lakes, but it's really more than that. To use one of Administrator Leavitt's metaphors, we have lots of musicians but we need more harmony.

On Tuesday of this week, President Bush signed an executive order intended to foster that harmony. The President's order has two main elements. First, it creates a means to coordinate Federal activities on the Great Lakes by creating a high level Federal task force consisting of the cabinet secretaries of the appropriate Federal agencies and appointing the Administrator of the U.S. EPA to

lead it. The Great Lakes National Program Office of EPA will provide staff support for this group.

Second, the order initiates the creation of a regional collaboration of national significance to bring hundreds of regional, State, local, tribal and other interests together for the purpose of jointly providing strategic direction for Great Lakes restoration and protection. Successful regional collaborations should not be dominated by the Federal Government. The Federal Government's role is that of convener and full participant. We support local and regional efforts to address the issues facing the Great Lakes, and encourage community stewardship on the local level.

With respect to the harmonization of Federal efforts on the Great Lakes, yesterday Administrator Leavitt convened at the White House the first meeting of the task force. At that meeting, the task force created the Great Lakes Regional Working Group called for in the President's Executive Order, which I will chair in my role as EPA's Great Lakes National Program manager.

And with respect to the regional collaboration, as I mentioned, on Tuesday in Chicago Administrator Leavitt joined Governor Taft of Ohio in his capacity as chairman of the Great Lakes Governors and Mayor Richard Daley in his capacity as chairman of the Great Lakes Cities initiative to discuss the organization of the broad based regional collaboration.

Now, the answer to many of the natural questions regarding this effort, will have to grow out of discussions between the participants. The Governor, Mayor and the Administrator will create a small work group to organize the effort. We will work with key members of Congress, with leaders of regional organizations, tribes, NGOs, heads of Federal agencies as well as representatives of the Canadian Government on our ongoing efforts.

This collaboration is intended to lead to results oriented strategies for making meaningful progress. The President has asked for a formal report by May 31st of 2005.

The Executive Order issued by President Bush, along with the follow-on activities, provide clear evidence of the President's commitment to the Great Lakes. The Executive Order also reflects our commitments to the U.S.-Canada Great Lakes Water Quality Agreement, as well as to the roles and responsibilities set forth for the Great Lakes National Program Office under Section 118 of the Clean Water Act.

The GAO report from April 2003 recommended that the Administrator of EPA ensure that the Great Lakes office fulfill its responsibilities for coordinating programs within the Great Lakes Basin and consult with the Governors of each Great Lakes State, as well as with other Federal agencies and other organizations. The GAO also recommended EPA take the lead to develop an over-arching strategy that clearly defines roles and responsibilities for coordinating and funding for projects. These recommendations are answered by the Executive Order.

It's our intent to incorporate the Executive Order into our response to the GAO report. We expect to finalize that response shortly and will transmit it to the GAO as quickly as possible.

Before closing today, I do want to mention and note President Bush's and EPA's commitment to two programs critical to the suc-

cess of Great Lakes restoration efforts. A major factor in cleaning up the Great Lakes areas of concern is the implementation of the Great Lakes Legacy Act of 2002, legislation with which this Committee is very familiar. I'm pleased to report that the agency has received 14 applications for project funding in response to the March 31st deadline for project proposals for the fiscal year 2004 Legacy Act appropriation of $10 million. We're in the process of reviewing these applications and expect to initiate at least one project this fiscal year. President Bush has requested an additional $45 million in funding for the Legacy Act in his proposed fiscal year 2005 budget, and the interest in Legacy Act projects positions us well to continue cleaning up sites at an increased pace if the President's requested amount is appropriated.

Thank you.

Mr. DUNCAN. Mr. Skinner, you'll have to close up there and get into the other program later in response to questions.

Mr. Barnes?

TESTIMONY OF GERALD W. BARNES, DIRECTOR OF PROGRAMS, GREAT LAKES AND OHIO RIVER DIVISION, U.S. ARMY CORPS OF ENGINEERS

Mr. BARNES. Mr. Chairman, committee members and other distinguished guests, I'm pleased to testify before you on the Corps' activities within the Great Lakes Basin.

As has been so eloquently stated, the Great Lakes system is one of our Nation's most vital natural resources. The Corps looks forward to continuing the strong dialogue that exists with our sister Federal agencies and with State and local and other agencies. This collaboration, we believe, will help us together address the regional issues relating to use, restoration and protection of this nationally significant water resources.

Our brief comments will focus on the several issues facing the physical, chemical and biological resources of the Great Lakes and Corps programs which are working within this Federal agency and State and local agency collaboration, and with international, Federal, State and local organizations.

The challenges facing the Great Lakes are numerous and complex. Environmental challenges include contaminated sediments, invasive species, non-point source pollution, habitat alteration and loss, and fish and wildlife conservation, to name the more dominant. There are also many economic challenges facing the State and local communities of the Great Lakes, including aging commercial and recreational navigational infrastructure and the increasing demands for water use and consumption.

Restoration of the Great Lakes in a sustainable manner requires that all these issues be considered from a watershed perspective, emphasizing collaboration and integration and based upon sound science. Success requires participation of all interested parties in the planning and decision making process. This participation requires an open dialogue to integrate sometimes competing or conflicting water resources needs. Such integration and collaboration is indispensable to meeting water challenges, and I pledge to the Corps' full participation in that collaboration.

The Corps is supporting numerous international, State and local efforts to protect and restore the Great Lakes ecosystem through our civil works programs. This support includes but is not limited to activities directed at three basic elements of the Great Lakes Resources: physical, chemical and biological. Within the physical area, undoubtedly the most valuable physical resources of the Great Lakes is the water itself. The Corps is a member of the team that monitors, predicts and regulates water withdrawal, flows and diversions through our support to the International Joint Commission Boards of Controls.

We are also supporting the IJC reference study that is reevaluating the operating plan for Lake Ontario. This interdisciplinary, interagency study is an example of the type of effort required to balance sometimes conflicting needs for water resources, including hydropower, navigation, riparian interests, recreational uses and the ecosystem. The Corps has developed an inventory of biohydrologic information relevant to the Great Lakes Water Management Partnership in partnership with the States and Great Lakes Commission. In addition to water management, the Corps is supporting the States and local partners on other aspects of Great Lakes physical resources, including land management, erosion protection and soil conservation.

Within the chemical area, contaminated bottom and sediments are the most difficult part of the chemical issues facing the Great Lakes resources. Through partnerships with Federal agencies, States, port authorities and local governments, the Corps has already removed over 90 million cubic yards of contaminated sediments from Great Lakes ports and navigation channels and managed these materials in confined disposal facilities. Over 70 million cubic yards of these contaminated sediments were removed from Great Lakes areas of concern.

In addition, the Corps is working with State and local groups to perform sediment cleanups through our environmental dredging program. The Ashtabula River partnership is a collaboration of Federal, State, local and industrial partners that have joined forces to clean up contaminated sediments from the Ashtabula area of concern, and is an example of the kind of work we are doing.

In the biological area, the Corps has collaborated with international, State and local agencies and organizations to address biological threats to the resources of the Great Lakes. The most visible of these of course at present is the invasive species dispersal areas on the Chicago Sanitary and Ship Canal. For this project, the Corps assembled an advisory panel with experts from numerous areas and settled on recommendations on the design and operation of the barrier.

The Corps is also supporting the efforts of States, Tribes and the Great Lakes Fishery Commission to battle the sea lamprey through construction of barriers in various Great Lakes tributaries, and to prevent the migration of these invaders to spawning areas. The Corps is partnering with States and tribes on the Great Lakes Fishery and Ecosystem Restoration program. Under this program, a series of individual projects are being planned and designed, and will be built to restore and enhance aquatic habitat, which will aid in the restoration of the Great Lakes Basin.

In closing, I'd like to speak to you briefly that the size and importance of the Great Lakes water resource and the complexity of the challenges before it necessitates a team approach to its management. I would add, sir, that we meet frequently, we speak frequently and we are in fact united as a Federal community in doing that. The Corps has worked as a team member and will continue to do so.

As an example, the Corps and EPA jointly constructed one of the first ecosystem restoration plans ever performed over 30 years ago on Lake Erie. We are a member of the U.S. policy committee led by EPA and participated in the development of the 2002 strategic plan to coordinate implementation of the Great Lakes Water Quality Agreement by Federal and State agencies.

Sir, as indicated by Tom, the Executive Order issued by President Bush establishing the Great Lakes interagency task force will build an already strong Federal, regional cooperation of national significance for the Great Lakes. We look forward to continue working closely with our Federal and State agencies as we build on that collaboration. We're pleased to have the opportunity to appear before you and provide an overview of some of our projects and studies of importance to the Great Lakes. The Corps looks forward to continuing these partnerships.

Mr. Chairman, this concludes my remarks. Thank you very much.

Mr. DUNCAN. Thank you very much, Mr. Barnes. It's hard to imagine that there could even have been 90 million cubic yards of contaminated sediment. That's a mind boggling figure.

Dr. Brandt?

TESTIMONY OF STEPHEN B. BRANDT, DIRECTOR, GREAT LAKES ENVIRONMENTAL RESEARCH LABORATORY, NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

Mr. BRANDT. I thank the Chairman and members of the Subcommittee for inviting NOAA to discuss its contributions to water quality improvement and restoration in the Great Lakes.

The Great Lakes are one of the Earth's greatest treasures and one of the Nation's most important aquatic resources. Many complex challenges lie ahead for the Great Lakes as they experience multiple stresses that are often interrelated. We can predict with near certainty that the Great Lakes ecosystem will continue to change. The Great Lakes ecosystem is one of the most clearly definable regions under NOAA's purview and mission responsibilities, and NOAA has over 15 Congressional mandates that guide its specific responsibilities on water quality, restoration, research, monitoring, services, leadership and coordination in the Great Lakes.

A number of specific activities are listed in my written testimony. Today I will highlight only a few of these that relate to restoration, restoration planning and research. One example of NOAA's restoration activities is the Coastal Zone Management Program, a unique, voluntary Federal-State partnership. Through this program, NOAA supports States through financial assistance, mediation, developing watershed management plans and participation in State, regional and local forums to improve water quality, restore coastal habitats, provide public access and mitigate coastal hazards. Examples of

specific NOAA restoration activities includes wetlands banking, rehabilitation of brownfield sites, restoration of coastal wetlands, establishing protected areas, enhancing fish and wildlife habitat and prevention and control of invasive species.

NOAA is supporting the restoration planning for the Great Lakes through recent grants to the Great Lakes commission in the Northeast-Midwest Institute. The Institute is reviewing the approaches that other regions have used to launch major ecosystem restoration initiatives to provide guidance for Great Lakes planning efforts. The commission and NOAA's Sea Grant are facilitating a series of State and provincial focus groups that will identify restoration priorities and associated strategic actions. State workshops have already been held in five States.

Also in early 2004, NOAA released its internet accessible national data base of restoration programs and published monitoring protocols that defined a core set of habitat specific indicators to evaluate restoration progress. Overall, NOAA believes that any water quality improvements and restoration efforts need to be based on the best available science, and that an ecosystem approach is essential to address the challenges inherent in these complex issues.

Best available science is needed to identify the sources of the problems and the most effective restoration strategy, to forecast end results and evaluate social and economic consequences, and to measure the success of any restoration effort in achieving its goals. The Great Lakes Environmental Research Lab is NOAA's largest presence in the Great Lakes. Its mission is to conduct high quality research and provide scientific leadership on important issues that lead to new knowledge, approaches and services.

GLERL does have an ecosystem capability that ranges from water quality, water quantity, waves, ice, circulation, climate and contaminants to food webs and invasive species. Its overall goal is to develop forecasting tools that can predict how human use and natural phenomenon will change the ecosystem. These tools will better equip decision makers to make economically and scientifically defensible decisions.

NOAA University Sea Grant scientists also develop and implement methods to restore habitats, protect the public and improve water quality. NOAA Sea Grant extension agents deliver credible science based information to the public and empower coastal communities to undertake well planned coastal development that preserves and promotes restoration of critical coastal resources.

NOAA also plays an active role in research coordination. For example, NOAA is currently appointed as the chair of the International Joint Commission's Council of Great Lakes Research Managers, which has responsibilities to coordinate Great Lakes research related to water quality. The Council recently held an international, interagency work shop to set up a formal framework for an overarching research coordination strategy for the Great Lakes. In fall, the Council and NOAA will host a workshop to set up an integrated observing system in the Great Lakes, which is needed to track the pulse of the Great Lakes and that will set the stage for measuring the success of any future restoration efforts.

Aquatic invasive species are also a major issue for the Great Lakes. NOAA co-chairs both the National Aquatic Nuisance Species Task Force and the Invasive Species Council. Last July, the agency established a NOAA National Center for Research on Invasive Species. This virtual center coordinates existing research programs throughout NOAA and will foster interagency partnerships to address prevention, early detection, rapid response, and management of invasive species.

In summary, water quality improvement and restoration of the Great Lakes is complex and will require an ecosystem based approach. Interagency collaboration is critical, and NOAA has a well established history of building partnerships to achieve results in this region.

On Tuesday, President Bush issued an executive order establishing a Great Lakes Interagency Task Force at the highest levels to promote regional collaboration of national significance for the Great Lakes. The Department of Commerce looks forward to working with our partners in the Federal Government and with State and local interests to make the Great Lakes region a model for the future of integrated environmental stewardship.

Thank you, Mr. Chairman.

Mr. DUNCAN. Thank you, Dr. Brandt.

Dr. Gray.

TESTIMONY OF R. MACK GRAY, DEPUTY UNDER SECRETARY FOR NATURAL RESOURCES AND ENVIRONMENT, UNITED STATES DEPARTMENT OF AGRICULTURE

Mr. GRAY. Mr. Chairman, I appreciate the opportunity today to represent USDA in testifying before the Committee. I'll summarize my statement and submit my full statement for the record.

We are also pleased to have been included in the task force that the President set up in the Executive Order this week. It's an honor and a privilege for us to do that, be on that, and an opportunity to coordinate our programs even more closely with the other agencies that are involved.

Two years ago, this Congress enacted the 2002 Farm Bill, which increased funding for soil and water conservation in not only the Great Lakes States, but in the whole country by many factors of magnitude. And it has been a real assistance to us as we have continued to work with farmers and ranchers in this country on water quality issues, on air quality issues, on soil and water conservation, on erosion, on other activities.

To give you an idea of the magnitude, in 2003, the funding for what is known as the Environmental Quality Incentive Program, which is the major cost-share program available to farmers and ranchers to carry out soil and water conservation on their land was $174 million in 2003. This year, it is over $975 million. And the Great Lakes States alone got around $115 million to $120 million. So you can see a significant increase in the magnitude of cost sharing available to farmers and ranchers to help carry out programs on their lands.

The programs that I'm responsible for, that we administer through this Natural Resources Conservation Service, which was formerly known as Soil Conservation Service, the old Soil Con-

servation Service was in business for almost 60 years before the name was changed and the activities were changed somewhat. The primary program that has been used in the program is to provide technical assistance to farmers and ranchers through their local soil and water conservation districts.

We have in the Farm Bill, one of the things I'd invite you to take a look at is on page six of my testimony, if you'll take a look. These are four of the major programs that we use, not only in the Great Lakes States, but in the whole country that are funded as a result of the 2002 Farm Bill. We have the Environmental Quality Incentives Program, which provides, as I said, assistance to farmers and ranchers in carrying out soil and water conservation practices on their land, wildlife habitat incentive program, wetlands reserve program, the farm and ranch lands protection program. These are four of the major programs available to producers in the Great Lakes States.

Another one that is not on this list is the Conservation Reserve Program. One of the major activities under the Conservation Reserve Program for the past several years has been to have joint efforts with the States involved, what is known as a Conservation Reserve Enhancement Program. And one of the main activities of that has been to put in buffer strips along streams to improve water quality. While we have many activities that these funds are used to address, and many priorities, water quality is and will continue to be one of the real high priority efforts as we move down the road.

We look forward to working with the Committee, we look forward to working with the other Federal agencies and local partners in addressing the problems that are faced by the Great Lakes. And we look forward to working with you on that. Thank you very much.

Mr. DUNCAN. Thank you very much, Dr. Gray. That Environmental Quality Incentive Program, you say it went from what to $925 million—you said it was in 2002———

Mr. GRAY. In 2003, funding to the best of my memory was $174 million.

Mr. DUNCAN. And it went all the way to $925 million?

Mr. GRAY. It went to $925 million this past year. And this coming year, I believe that the figure, and let me confirm that—the Farm Bill for this coming year, 2005, is $1.2 billion in the Farm Bill, $1.2 billion, and in the President's budget $1 billion.

Mr. DUNCAN. I don't know that there's another program in the whole Federal Government that's had that kind of an increase in that short of a time. That would be about a six-fold increase.

Mr. GRAY. Just about. And believe it or not, we still have a backlog in most States of people that are waiting to get assistance in applying soil and water conservation practices.

Mr. DUNCAN. That's amazing. All right, thank you very much.

Ms. Thorson.

TESTIMONY OF ROBYN THORSON, REGIONAL DIRECTOR, U.S. FISH AND WILDLIFE SERVICE, DEPARTMENT OF THE INTERIOR

Ms. THORSON. Mr. Chairman and members of the Subcommittee, I'm the regional director of the Fish and Wildlife Service Midwest

Region, and our region has the lead for our agency in responsibilities for Great Lakes conservation.

We work with these other Federal agencies that are at the table today, and I'm very pleased to join them and be able to tell you about what the Fish and Wildlife Service is contributing toward Great Lakes restoration. The Service is the lead Federal agency responsible for conserving, protecting and enhancing fish, wildlife and plants and their habitats for the benefit of the American people.

Through our programs and our partnerships, and I emphasize partnerships, the Service supports continued efforts toward restoration in the Great Lakes ecosystem, that's the land and its waters. We are doers. Here is some of what we do.

We are a leader in reducing contaminants in the Great Lakes and protecting and restoring watershed quality through our natural resource damage assessment and restoration program. Examples are at Saginaw River and Bay in Michigan, where we led the multi-party Trustee Council that removed contaminated sediment before it reached the Great Lakes, restored coastal wetlands and lakeland prairie, and protected habitat that benefits the maintenance of water quality.

We have similar efforts at Green Bay and Fox River and Grand Calumet River. The U.S. Geological Survey, a sister agency in the Department of Interior, is an effective and valued science partner in water quality and ecosystem restoration, and we work closely with the USGS and EPA at the regional and national levels to develop water quality criteria that protect the most sensitive species, including those that are listed as threatened or endangered.

In addition, we participate in the State of the Lakes Ecosystem Conference, SOLEC, held every two years. We have an active role in developing indicators that help us measure and be accountable for the state of major ecosystem components. Indicators include the health of lake trout, coaster brook trout, scud, contaminants and colonial nesting water birds; contaminants affecting the productivity of bald eagles; the status of Great Lakes islands, and lake sturgeon restoration.

As mentioned by Mr. Oberstar, aquatic invasive species are a growing and urgent national problem. In this context, the binational sea lamprey control program represents an effective comprehensive strategy contributing to restoration goals for the Great Lakes. It is implemented by the U.S. Fish and Wildlife Service, along with Canada's department of fisheries and oceans. Other partners, particularly in science, include the U.S. Geological Survey, all under the coordination of the Great Lakes Fishery Commission.

In operation since 1955, this sea lamprey control program is delivering effective control of one of the most damaging invasive species in North America. This effort represents partnership, it represents clearly set goals, good science, and it has results. The sea lamprey control program is probably the best example of invasive species control in the world.

The Service also assists local partners through our aptly named Partners for Fish and Wildlife program, helping private citizens. We have a coastal program in the Great Lakes and a fish passage

program providing technical and funding assistance for locally led projects. These wetlands stream restoration projects contribute to the reduction of sediment transport within the Great Lakes Basin, the improvement in water quality, flood control and Great Lakes shoreline protection.

More than half of all adults in the United States photograph wildlife, bird watch, hunt or fish. The Great Lakes States gain economic benefits from these activities. For example, in the eight Great Lakes Basin States, there are over 10 million anglers who spend over $6 billion a year, there are over 4 million hunters who spend almost $5 billion a year. These are traditional constituents of the U.S. Fish and Wildlife Service.

But there are people who never hunt or fish, but for whom the natural heritage of the Great Lakes is their inheritance, it is their entitlement. And thanks to the restoration efforts of Federal agencies in partnership with States and communities, it will be their legacy.

The U.S. Fish and Wildlife Service is ready, anxious to contribute toward the President's Executive Order establishing a Great Lakes Interagency Task Force under the leadership of the Environmental Protection Agency. We appreciate this effort of the President to address this important ecosystem and to coordinate leadership, planning and outcome based goals and accomplishments in the Great Lakes Basin.

Thank you for this opportunity to share the U.S. Fish and Wildlife Service's contributions and the importance of having a seat at the restoration table.

Mr. DUNCAN. Thank you very much, Ms. Thorson, and I thank all the witnesses for very fine statements. I did give a very lengthy opening statement, and I mentioned in that statement the Great Lakes Legacy Act, which we passed through this Subcommittee and our full Committee and which was signed into law by the President in 2002. The main author of that was Dr. Ehlers, and I'm going to go to him in just a moment for our first round of questions.

But the staff, in all the materials I was given for this hearing, have some interesting statistics and I'd just like to read these into the record. The eight Great Lakes States already receive from the Federal Government, and this doesn't count the activities that the Federal agencies themselves carry out. But 36.8 percent of the Clean Water Act SRF funding, which is $487.3 million this year, 27.4 percent of the Clean Water Act non-point source funding, $56.9 million this year, 25.8 percent of the Clean Water Act's State program support funding, $44.1 million, 15 percent of the Farm Bill Environmental Quality Incentives Program funding, $131.9 million this year, 14 percent of the Farm Bill Wildlife Habitat Incentive Program, $4 million this year, 27 percent of the Farm Bill Wetlands Reserve Program funding, $73.5 million, 20 percent of the Farm Bill Land Protection Program funding, $17.5 million.

So just these seven programs, and there actually are other programs that benefit the Great Lakes and things that the Federal agencies, as I said, are doing themselves. But just these seven programs provide $815 million directly to the States and to farmers in those areas.

It's so impressive that I thought just a minute ago that maybe I would like to see if we can pass some legislation making the Tennessee River one of the Great Lakes, so we can benefit more from some of these.

[Laughter.]

Mr. DUNCAN. But at any rate, we'll go to Dr. Ehlers for the first questions.

Mr. EHLERS. Thank you very much, Mr. Chairman. I'm sorry I was a bit late, I was detained on the Floor.

I did have an opening statement, and I request unanimous consent that it be entered into the records.

Mr. DUNCAN. That statement can be entered into the record, and you can make any comments you wish, in addition to your questions.

Mr. EHLERS. Thank you.

I first of all want to join you in the comments about the Great Lakes Legacy Act, and thank the EPA for their work on that. They have really gone to town on it. I appreciate the $45 million request for next year. I certainly hope that is funded and that we can get it up to the authorized level next year, which is $50 million.

I also appreciate Administrator Leavitt's efforts on the task force which is being developed. I've discussed it with him a number of times and was very pleased to see it go into effect. In fact, I'm very concerned about something, and that was mentioned by Dr. Brandt in his statement, his very last words talked about the need for integrated environmental stewardship of the Great Lakes. And that's precisely the point, and that's what the President is trying to achieve.

What I had in my opening statement was a description of a bill that I will be introducing later today, which is a companion to what the President and Administrator Leavitt have done with the Executive Order. It is intended to be the next step, but both of us are reacting, and it's amusing to me that went on independent paths, Mr. Leavitt pursuing what the Administration can do, I've been pursuing what the Congress could do in view of the GAO report, which pointed out all the problems in the programs.

I just think we can do things much better with the same money than we're doing right now. And my approach was to look at what legislation the Congress needs to ensure that we have coordination on all of these efforts. There are so many different agencies and so much is being done that it's not coordinated, or in Dr. Brandt's words, it's not an integrated environmental stewardship program.

So what is the President and Mr. Leavitt's approach is in terms of the operation of the Executive Branch, I think we also have to be sure that they have the authority that we need to give them to make certain that all of this is totally integrated, that we have a comprehensive approach. So my bill would basically appoint a committee to evaluate what we have done in the past 10 years in this, where we stand, and then look at what the next 10 years would be like under the current governing situation, then suggest a comprehensive approach to integrating all of these together. I would certainly appreciate your looking at the bill as soon as it's introduced, and I'm sure it will be going to this Subcommittee as well.

In addition to that, I just wanted to ask one question of Dr. Gray. On the chart that you referred us to on page six, and I'm normally not that defensive of my district, but I couldn't help but notice that Michigan, although it owns 40 percent of the Great Lakes and Ontario owns just a little bit less, and all the rest have just dribbles of it, Michigan seems to have less money from the Department of Agriculture for all these programs. In fact, it's not first in any of them, even though we have all that water and we have 3,500 miles of shoreline.

I don't ask you to defend each and every one of us, but it seemed to me rather strange that Minnesota gets almost twice as much money under the Environmental Quality Incentive Program. And while the wildlife habitat on almost everyone is the same, but Wisconsin and Minnesota once again get more. Wetlands Reserve program, the Illinois and Indiana, Minnesota are all well above Michigan and so on down the line. Could you tell me why that is? Is it the nature of the programs? Is it the weakness of the Congressional delegation?

[Laughter.]

Mr. GRAY. No, sir, that's not it. It might have been the first part, but not the second part of your statement.

[Laughter.]

Mr. GRAY. It may have been the nature of the program, but it wasn't the weakness of the members from the great State of Michigan.

Mr. EHLERS. The real question is, how are these allocations made? It doesn't seem to correlate with the amount of Great Lakes area that these have. All the States.

Mr. GRAY. I can answer directly for the EQIP, the Environmental Quality Incentives Program. We have a national formula that allocates money out to the States based on the acres of land and different land uses, on the different resource problems that they have, like water quality, soil and water conservation, erosion and various factors in that, air quality and a number of factors.

And each State then, that formula is run against the total, and each State gets an allocation based on that formula. I can't tell you why that formula seems to be lower for Michigan than it does for some of the States around it, but I'd be happy to look into that.

Mr. EHLERS. I'd appreciate that, if you could just send me a letter on that and on the others as well, I'd appreciate it.

Mr. GRAY. Yes, sir.

Mr. EHLERS. I yield back my time, Mr. Chairman. Thank you.

Mr. DUNCAN. Thank you very much, Dr. Ehlers.

Mr. Oberstar.

Mr. OBERSTAR. Thank you, Mr. Chairman. Dr. Ehlers, I wasn't keeping track.

[Laughter.]

Mr. OBERSTAR. But it has less to do with that allocation of funding, it has less to do with shoreline and the Great Lakes waters than it has to do with agricultural programs. And I think when you look at the dollar volume of EQIP, it does look like it's a large number, this Environmental Quality Incentives Program. But it is there because that number represents the consolidation of a number of existing programs that were consolidated into this new

EQIP, and the funds reflected in Dr. Gray's statement are those allocated to the Sodbuster program and to the Swampbuster program, and to the old SCS programs. Those are pre-existing the EQIP and are just distributed by formula.

I suspect that Michigan does better than Minnesota with respect to programs that directly affect water quality. We also see that the State revolving loan fund programs, 30 percent are allocated to Great Lakes States. That's a very misleading statement, because New York is included in the Great Lakes States, even though it has just that little nose out there in the Lake Ontario area, and the Thousand Islands and so on. Most of that money is downstate New York. Most of that State revolving loan funds is used elsewhere in New York, not on the communities bordering on the Great Lakes.

So I think again these figures are misleading. We could probably spend some time—and I'll yield to the gentleman if he has a comment.

Mr. EHLERS. No, I don't want to engage in any more petty———

[Laughter.]

Mr. OBERSTAR. No, it's a fair question of how these funds are distributed.

Mr. EHLERS. I understand that. And I recognize this is distributed not just on the basis of its effect on the Great Lakes, but on the basis of the environment in general. But it struck me that in view of our prominence in the Great Lakes, Michigan was low in all those categories.

Mr. OBERSTAR. Probably the other parts of Minnesota aren't doing as well as Michigan and need more money to catch up.

Mr. EHLERS. I doubt that.

[Laughter.]

Mr. EHLERS. Just as long as you're Ranking Member. I'll yield back.

Mr. OBERSTAR. For Mr. Skinner and Mr. Barnes, among the many sources contributing to pollution of the Great Lakes, air depositions, point sources, industrial and municipal point sources, ballast water from the salties entering the Great Lakes, deck sweepings from the lakers, non-point sources, construction sites, forestry, agricultural runoff, where by degree of significance in volume of discharge and toxicity of substance do you rank non-point source?

Mr. BARNES. Sir, let me defer to Tom to answer that first.

[Laughter.]

Mr. BARNES. And I will consider what I will say.

Mr. SKINNER. I think in general we've been saying in recent years that non-point source runoff is a major, major source of problems in the Great Lakes. I can't remember as I sit here whether we were saying 60 percent or 70 percent or 50 percent of the current problem that needs to be addressed. But it clearly, Mr. Oberstar, is a very significant problem.

Mr. OBERSTAR. Municipalities and industries have spent in excess of $10 billion on cleanup in the Great Lakes. That is one of the reasons Lake Erie has come back to life, that walleye are being caught in Lake Erie. But you can only eat one a week, if that many.

Now, I welcome the initiative of appointing the task force, yet another. I suggest we don't really need a task force, what we need is political will to get in and invest the money, to deal with the problems that have been documented, that we know exist, that have been established, on which the facts are established for years. We need money to go in and do the remediation of those harbors. That's where the toxicity is persisting.

The Corps of Engineers has been very supportive and participatory in the harbor sediment remediation initiative that has been undertaken in Duluth Harbor by University of Minnesota Research Center, and shown how, using mining technology, the flotation technology of beneficiating low-grade non-magnetic ores can be applied to removing toxics from the sediments in Great Lakes harbors.

Now, where is the money to take that to the next step? I'm not pointing a finger at you. The Corps has asked for it. The Office of Management and Budget has refused to provide the funding. And task forces are no substitute for dollars invested in the programs that we know are affected in cleaning up the harbors and the toxic hot spots in the Great Lakes.

Now, if Canada can do its fair share, then so can and should the United States. We have State revolving loan funds that are sources that municipalities use. The city of Duluth and Superior, for example, could use and would use the money available to them in partnership with the Corps of Engineers and EPA. But that money was cut out of the budget for the coming fiscal year. And those SRFs haven't been replenished in the last three years.

We have a bill in our Committee, $20 billion that had been approved on a bipartisan, overwhelming voice vote in this Committee, and we can't even get it to the House Floor to address the needs of municipalities for the next step cleanups. If we're going to make a real effort in the Great Lakes Basin, then we've got to take that next step.

Mr. Skinner?

Mr. SKINNER. Yes, sir, thank you. I'd like to address your first point. I think it gets to the overall question of, are there funds associated with the actions taken by the President and by Administrator Leavitt this week. Let me say two things in that regard.

Number one, the President has put in the 2005 proposed budget $45 million for Legacy Act contaminated sediments cleanups. Now, we know that's just the start. You all on this subcommittee know better than most that that's just a start. But it is $45 million more than any President ever has committed to contaminated sediments cleanup. And I think it's a significant statement on the part of the Administration. The President has proposed $3 million additional for RAPs and LaMPs in the 2005 budget. Funding for the fish barrier that Mr. Barnes was talking about earlier, just outside of Chicago, another $500,000 for invasive species research that's going to the EPA Office of Research and Development.

Those are significant commitments on the part of the Administration. And the other part of that commitment is putting together this body, these two bodies, really, the first being the Federal task force that's going to better coordinate the existing dollars in the Federal agencies now, and the second being the regional collabora-

tion which is really not only the next logical step but the essential step before we get to the point of talking about how you prioritize the various needs that are out there.

We've all heard the numbers, $4 billion, $6 billion in costs to really bring the Great Lakes back to where they should be, to restore the Great Lakes. It would be very difficult to throw that amount of money out there right now, given the current state of the plans and some disagreement on what the priorities should be.

This regional collaboration is really designed to integrate all of the work that's gone on previously, it's not designed to come up with a new fresh set of plans and start from scratch. The purpose of it is really to coordinate what's out there right now, to get for the first time ever local governments, mayors, the States through the Governors———

Mr. OBERSTAR. We're running out of time here, Mr. Skinner. I appreciate your elaboration of it. It's really not for the first time. This coordination has been done many times. Governors, mayors have been convened time and time again. I welcome this initiative, it's very good. I'm glad to see the Administration's interest in it. The $45 million was proposed in previous Clinton budgets and never appropriated by this Congress.

I hope now with unified government here, Republican White House and Senate and House that that means something, that they'll move ahead and appropriate those dollars. But that's been languishing for the last five years. And we know, frankly, what the issues are. We know what needs to be done. Any scientist who's studied the waters and the air depositions in the Great Lakes knows what needs to be done.

What we know also is the money hasn't been forthcoming. And when the funds are cut out of important programs, such as the State revolving loan funds, States have fewer resources, not more, to deal with these problems. I'm glad to see that money in the President's budget. It hasn't been there in the previous three years, it was there in the Clinton budget. He wasn't able to get it done. This Congress didn't respond. And toxics are, toxins are still being taken up by fish and by people. We can't continue with this.

So we'll be watching very carefully. I look forward to watching under a microscope the progress of this task force.

Mr. SKINNER. Thank you, sir.

Mr. DUNCAN. Thank you very much, Mr. Oberstar.

Mrs. Kelly.

Mrs. KELLY. Thank you, Mr. Chairman.

I want to remind you, Mr. Oberstar, that we in New York do believe that we are part of the Great Lakes. We invite you to come and take a good look at our shoreline.

Mr. OBERSTAR. I spent a lot of time up there with my late wife, Jo, who was from Rochester. I know a lot about Ontario, and the Finger Lakes and the Thousand Islands and Niagara Falls and so on. You have a great legacy.

What I was simply pointing out was that it's misleading to include New York in that 30 percent allocation, because so much of that money goes downstate New York away from the Great Lakes.

Mrs. KELLY. Let me explain why I believe that to be so. And I want to associate myself with some of the remarks. I had a bill

here in this Congress that I have been trying to get through that would reauthorize the State revolving fund at the level of $25 billion over the next five years. And that was far less than we know we need to try to do something.

What we know is the chain of ecosystems now is such that it is affecting not only the subsets and the ecosystems, but the human beings who operate in and around those ecosystems. And it is extremely important that we get this cleaned up.

I'm sitting here listening to a concern about how the money is being allocated and I'm being told that there are studies that are ongoing. We have studied the Great Lakes for as long as I remember, and I'm a pretty old chick. And I want to tell you, I think the time has ended, we need to get some results. The Great Lakes, I was born and brought up in Ohio, that is also a Great Lakes State. And the Great Lakes have been suffering since the time I was born.

It is time we have results. More studies, more commissions, are not going to put into the ecosystems of the Great Lakes what we've got to put in. What small amount of money, $45 million is nowhere near what is needed. We understand that we're in a budget crunch right now. We understand that the money cannot necessarily be put in this year. But next year and the year after that, we're going to come back at you and we are going to ask for some results, and we are going to ask for some more money.

It is time we clean up the waters of America. And the Great Lakes are a huge feeder system for so much of our water in America. It's extremely important that this bill get passed. But I would like very much to see that money used in a very pragmatic way to clean the water.

I really don't have a question, I just wanted to make a statement here. I think it's very important that these people hear that there is a frustration on the part of this Committee that we're not getting results, the kinds of results and the quality of results that we need.

I yield back.

Mr. DUNCAN. Very fine statement, Mrs. Kelly.

Mr. Costello.

Mr. COSTELLO. Mr. Chairman, thank you. I think Mr. Skinner and the entire panel can sense the frustration on the part of members here, and I suspect that you are frustrated as well, that you are restraining yourself from jumping into the discussion here.

I think everyone has said, every member who has spoken has said that we appreciate the fact that there will be coordination in the President's Executive Order. But the fact of the matter is, it's very difficult for me to go back to Illinois and tell the Governor of Illinois or the Mayor of Chicago that we are making great progress, that on one hand the President in his budget has cut $178 million from the revolving loan fund, but he's going to appropriate $45 million. I know the question is going to be, how am I better off, or how are we in the Great Lakes better off.

So can you answer that question for me?

Mr. SKINNER. Thank you, Mr. Costello. I think with regard to the $45 million, you're going to better off, each of the Great Lakes States is going to be better off because we're going to get more quickly to the contaminated sediment cleanups in the areas of con-

cern. And those do have a direct impact on water quality, the environment, the ecosystem as well as tourism in a lot of those places.

It's hard to compare apples and oranges when you're talking about the $45 million for the contaminated sediments cleanup and the State revolving fund issue. I can tell you, as you know, firsthand from my experience as the director of the State environmental agency in Illinois, as well as my experience as the regional administrator in Region V before coming out here, I know firsthand the wastewater and drinking water infrastructure needs that are out there. There are numbers that have been publicized very widely, and they range into the numbers that are astronomical.

I also know that this has been a debate for a number of years between Congress and the Executive Branch as to what the appropriate level of funding is for the State revolving funds. All I can tell you is that the Administration has taken a close look at it, and funding it at the level, and has proposed funding at the level that they believe is doable at this point.

But I'll leave, I guess, sir, the debate about the extra $176.8 million or whatever it is to you and to OMB.

Mr. COSTELLO. My understanding is that the Lakewide Management Plans, the Remedial Action Plans exist, they are ready to go. But in fact, that we do not have the resources to implement them. Is that correct? And if so, how many plans are ready to go but lack adequate resources to implement them?

Mr. SKINNER. The work that's been done in the past five or ten years on Remedial Action Plans and Lakewide Management Plans has been impressive, and has put us in a good position. We're at the stage now where we're looking at specific cleanups at specific sites. The first $10 million in Legacy Act funding that was provided by Congress and the President last year, we have applications in-house, people have geared up in the local areas, the areas of concern, to start these projects. But it takes some time for them to gear up and put themselves into position.

There is also, as you may recall, a local match requirement that went into the Legacy Act of, I think, 35 percent. It's a challenge for local communities to come up with that match sometimes. I think that has probably slowed progress slightly.

Mr. COSTELLO. But are there projects ready to go for the funding?

Mr. SKINNER. The answer to that is they're close, but they're not quite there. We have, I think, 14 applications in-house that are in one way or another ready to go that we're reviewing and we want to get out the door as quickly as possible. I've said this before in another forum, if somebody threw $100 million in Legacy Act funds into the budget this year, we wouldn't be a lot further along. It takes time for these projects to get themselves into a position to actually spend the dollars. The needs are cataloged out there, the problems are cataloged. It's actually the mechanics now of going ahead and doing these cleanups.

And I think as we get going here, rolling with $10 million and $45 million more, then it's going to start to flow in, and we're going to be in a position to do that.

Mr. COSTELLO. On the issue of funding, in the President's Executive Order, your office takes on additional responsibilities. But have

you been given any indication, number one, do you need additional resources to carry out these additional responsibilities, and number two, do you anticipate either a request on the part of the Administration to the Congress additional funds to implement these additional duties?

Mr. SKINNER. Well, I can tell you that we are, within EPA internally discussing that issue as we speak, really. We're trying to figure out, within the Great Lakes National Program Office, whether we need additional resources to do the staffing and the administrative work that's called for. We will probably draw on the Office of Water resources within EPA to supplement the GLNPO resources. We envision being able to get the job done, though, from an administrative and management standpoint, with the resources we have now.

Mr. COSTELLO. Dr. Brandt mentions in his testimony that the population growth in the Great Lakes region will continue to increase stress and bring about additional problems. What are the trends in population growth surrounding the Great Lakes? Have you taken a look at that, and what should we anticipate in the coming years?

Mr. SKINNER. I don't know as I sit here much about specific figures in terms of population growth in the Great Lakes. I can tell you that in general, the segment of the population of the U.S. that's impacted by the Great Lakes and its watershed is incredible. But I guess I don't have a specific answer to the question about the rate of growth.

Mr. COSTELLO. Two quick questions for Mr. Barnes. One is, what's the status of the construction of the barrier for the Asian carp?

Mr. BARNES. As you know, the first barrier of course was put into operation several years back and has been maintained as a demonstration project. The second barrier design is underway and will be completed next month. Construction will begin shortly afterwards, sir, with a view to it being completed by the end of September.

Mr. COSTELLO. By the end of September?

Mr. BARNES. That is correct, sir.

Mr. COSTELLO. The second question is that for, I guess, close to 30 years, we have known about the contaminated sediments in the Great Lakes. I think we identified 43 original areas of concern and only to my knowledge 1 or 2 of those areas have been remediated. That's not the best track record.

I am given to understand that in the 1980's and 1990's that there was a concern expressed that we didn't have the dredging technology. Is that correct? And number two, does the dredging technology exist today?

Mr. BARNES. Sir, generally we do in fact have the dredging technology sufficient to remove the sediment. The problem, both in the Great Lakes and throughout the U.S., is in the location of the acceptable places to place the contaminated sediments in a manner they can be positively treated. So location of additional CDFs that are fully coordinated with my Federal friends is a challenge that we all face and must continue to work on.

I will let you know that most immediately, of course, the Ashtabula River project is one that involves responsibilities for both Federal and non-Federal parties that we have to work our way through who is responsible or not responsible. And also, we are in an active collaboration with the States of Wisconsin and Indiana on Fox and Grand Calumet Rivers with regard to remediation of those two areas.

So the technology, I don't believe, is something I can say that constrains us, nor in the case of the Corps do I say that staffing in fact constrains us. We have the wherewithal, sir. It's a matter of locating acceptable ways to place the material and certainly prioritizing within the limits that are placed before us the proper expenditure of funds and the right priority.

Mr. COSTELLO. Very good. Thank you.

Mr. DUNCAN. Thank you very much, Mr. Costello.

Mr. Pearce.

Mr. PEARCE. Thank you, Mr. Chairman.

I wonder, Mr. Gray, I think it's your report, you were mentioning the attempt to quantify the resources, quantify the outcomes of your projects. You've got the CEAP project. Is that a report that's fully finished and available?

Mr. GRAY. Which program is that, sir?

Mr. PEARCE. You say that you have a CEAP program to quantify the outcomes of your dollars that you spend.

Mr. GRAY. The CEAP program within NRCS is a program that's designed———

Mr. PEARCE. No, I understand what's it's designed for. Do you have a finished report?

Mr. GRAY. No, sir, we do not at this time.

Mr. PEARCE. Mr. Brandt, do you all quantify the outcomes of your dollars spent?

Mr. BRANDT. Quantify the outcomes?

Mr. PEARCE. In other words, Dr. Gray's statement says they wish to fully quantify the resource outcomes for programs and I'm wondering if you have any measurement of the outcomes of your programs. For instance, did you go into Ojibwa County in Ohio and see how many feet or miles of bank along the Silver Creek actually were changed, that the erosion was reduced in those and how many square feet of wetland habitat areas, how much bang did you get for your buck out of your $190,000?

Mr. BRANDT. The Coastal Zone Management Program is developing performance measures exactly along those lines in terms of numbers of miles improved and so forth.

Mr. PEARCE. But you couldn't tell me how many miles or how many feet of shoreline along the Silver Creek have been changed from that $190,000?

Mr. BRANDT. I can get that number. There was a report, there have been reports produced that detail those numbers.

Mr. PEARCE. The amount of e-coli bacteria that was reduced at the beaches at Indiana Dunes State Park from that $100,000, you then quantify the outcomes of your grants.

Mr. BRANDT. That one would be a little more difficult to quantify, yes.

Mr. PEARCE. I think, Mr. Chairman, my point is that the GAO report says we spent $2 billion between 1992 and 2001. And Mr. Skinner, that's just the Federal Government. The States have spent an additional $1 billion on projects that impact, that are Great Lakes specific, another half billion on projects that are non-Great Lakes specific. And for the $3.5 billion, Mr. Skinner, is it possible for us to assess and say that we have by 10 percent or 1 percent or 18 percent reduced the problems in the Great Lakes region, or do we not have any quantification?

Mr. SKINNER. I think the question, it's probably a two or three part answer. Certainly with regard to the areas of concern, yes, you can measure, you can quantify when those have been cleaned up. With regard to, for example, drinking water and wastewater treatment, you can measure the water quality, the sort of baseline and after water quality, or on an ongoing basis the water quality in the Lakes with regard to constituents and determine whether or not you're having success or whether or not more work is needed.

The problem on that front is that although the numbers are large in terms of billions of dollars, the additional needs still exist, and the existing facilities still need to be upgraded.

Mr. PEARCE. Thank you. I mean, my point though is that we spend large sums of money, whether it be $25 billion, but they disappear in chunks of $100,000, $190,000. Mr. Barnes, how much did it cost to get rid of 90 million cubic yards of contaminated sediment?

Mr. BARNES. Sir, to date, about $300 million.

Mr. PEARCE. About $300 million. So if we can ever quantify it, but I think that a lot of our grants go, and one of my frustrations is that as we, this problem according to one of the reports, the first rule or law was passed by Congress in 1978. I don't know how much we've spent since 1978, the GAO report only talks about the $2 billion since 1992 to 2001. And I fear that we've distributed a lot of grants at $190,000 to $200,000 per pop, and I don't think we know what we got for our money, frankly.

And I think if we do not know what we got for our money, we'll continue, if we don't begin to measure. So Dr. Gray, if you ever get your CEAP project finished, that is an attempt to quantify, I would like for our office to get it, and I would encourage all of you to begin to quantify, because the amount of dollars that we have are going to decrease.

As we look into the next generation, we've got this many workers, we've got the bell-shaped population curve, the baby boomers are moving into retirement, and they're going to take more money on health care than what we spend now. You've got this many people coming to replace them to work. There is a very severe dynamic here.

And the money that you all get is going to be severely restricted, because I will tell you that seniors vote more than anybody else. They're going to get money first. If we continue to just spend our money without quantification, it doesn't make sense and we're never going to get where we're going to be, and we're going to end up, we've gone from 1978 to now without making any measurable progress, or the progress is this big on this big a scale. We cannot

tolerate that any longer. We just have to make our resources more efficient.

That's my only observation, Mr. Chairman. Thank you.

Mr. DUNCAN. Very good comments, Mr. Pearce. You're exactly right on target.

Dr. Boozman.

Mr. BOOZMAN. I really don't have any questions. I appreciate your having the hearing, though. I think this is certainly a very important subject. I was sitting here, I was kind of like you, I was trying to figure out how I could get Beaver Lake in Arkansas included.

But it is a very important subject, and certainly is a tremendous natural resource that we've just got to protect.

Mr. DUNCAN. Thank you very much.

Dr. Ehlers has some additional comments or questions.

Mr. EHLERS. Mr. Chairman, I just want to add something here. We'll get into a bit of a parochial discussion later about who gets how much money. But that's not the real issue here. The real issue is, the Great Lakes are indeed a national treasure, and those among the Congress who have not visited there should.

I have some beautiful slides given to me by Dr. Howard Tanner of Michigan State University, and I should have brought them here just to show at the start, showing what the Nation would look like as viewed from above if the Great Lakes were in different places. It's fascinating, because we're so used to looking at the map and seeing them there and just saying, oh, those are the Great Lakes.

But when you see them placed over the southwest, and they stretch from the tip of California up to Oregon and cover a good share of Nevada, you say, good grief, they are big. Or when you put them in the southeast, they stretch from Pennsylvania down through Georgia. That's amazing. A lot of water. And if you add together every bit of surface water in this country, every river, every lake in the whole country, add them all together, you still have only 5 percent, you have one-twentieth of what we have in the Great Lakes.

So it's a real treasure. And our goal here is to make sure that we have the right programs, that the programs are integrated and coordinated, and that they are properly funded to do the job. And that's what I think you're trying to do and that's what we're trying to do. I hope the combination of the President's Executive Order and my bill, if it should receive the favor of this Subcommittee and the Congress, could really establish a strategy to do that.

I know we've done a lot of things in the past. We have the Great Lakes Strategy of 2002, which the GAO said is not a strategy, it's just a listing of things to do. So I hope we can really come up with a good Administrator's strategy, a good, laid-out strategic plan and that we could start really going places and doing it right.

I yield back. Thank you, Mr. Chairman.

Mr. DUNCAN. Thank you very much, Dr. Ehlers.

Let me just say this. I want to commend the Administration for coming out with their Executive Order concerning the Great Lakes. And I can tell you that, and I mentioned in detail in my opening statement how important the Great Lakes are, not only to that part of the country, but also to the Nation as a whole. And that's

why I was enthusiastic in my support of Dr. Ehlers' efforts on the Great Lakes Legacy Act that he shepherded through this Subcommittee and the Congress.

Now, Mrs. Kelly expressed some concern about this, and I think a couple of other people have come out with statements about that they think this Executive Order might just be another study. And I can tell you that every member of Congress on all problems, we get tired of seeing things studied to death, and everybody wants action.

What I would like to hear from each of you is this, we'll just go right down the line. And I would like for you to tell me what you can do, what you will do, what you think your agency, what steps your agency will take to make sure that this Executive Order is carried out and does not become just another study on the giant trash heap of studies.

So let's hear what suggestions you have or ideas or thoughts you have about actions. Because I think that that's the goal of this Executive Order. We've got these Remedial Action Plans and we've got these Lakewide Action Plans. So what do you say about that? Mr. Skinner, we'll start with you.

Mr. SKINNER. Thank you, Mr. Chairman.

For better or for worse, EPA is charged in the Executive Order with staffing in essence the cabinet level task force. And also, Administrator Leavitt was just dispatched by the President to coordinate the regional collaboration.

Mr. DUNCAN. That's right, and that's why I started with you, not just because you're seated there first. You're the lead dog, so to speak.

Mr. SKINNER. Thank you, sir. And I can tell you that this project is unusual in one very specific way, and that is, it has Mike Leavitt's personal attention and personal commitment of time. He has cleared his schedule for the next two weeks to do nothing but go out and meet with the Governors, the mayors and the relevant environmental groups and NGOs in the Great Lakes States in order to get this process underway.

He recognized from the day he came into the agency that this was an example of the type of collaboration he was interested in promoting and pursuing and is putting a great deal of his own time and effort into this. So that alone I think will guarantee that it has the staff's full attention within the agency, and that we're going to push the process along.

The other thing, we ran out of time when I was answering Mr. Oberstar's question, this collaboration is not intended to be a body that generates new plans. There are a number of plans out there, some of them conflict, some of them are consistent. The collaboration is intended to bring together the relevant decision makers in the Great Lakes, to have them prioritize the problems that are out there in terms of what needs to be resolved and how quickly they should be resolved, and then to go from there, I assume, and deal with the funding issue, what funds can be made available by Congress and the Administration and how those are going to be applied.

But this is intended, those of you that know Administrator Leavitt know that he's constantly moving forward, if nothing else.

So this will not be a body that sits on its hands and generates new paper to be filed away some place. The idea here is to move forward and actually get something done.

Mr. DUNCAN. All right. Thank you very much.

Mr. Barnes.

Mr. BARNES. Sir, within the Great Lakes area, I bring 5,000 people, I also have quick reach-back capability to some 2,000 esteemed scientists in the five laboratories that the Corps has, I bring all of them. As necessary, I can bring the other 30,000 employees of the Corps. I bring a strong partnership with the private sector and contracting. And I bring a resolute commitment to full and can-do collaboration with my Federal colleagues here to do whatever is necessary to clean up the Great Lakes and to restore them to the level at which the citizens of our two countries, the U.S. and Canada, deserve.

We have can-do and we will execute, sir, consistent with the funds that are provided.

Mr. DUNCAN. All right. Dr. Brandt.

Mr. BRANDT. Thank you. I think that, what I view the Executive Order as is sort of, let me back up a minute. As all of you know, there's a lot of coordination in the Great Lakes. It occurs at individual levels, informal levels, project levels and even on specific committees and task forces and so forth.

What I believe that this executive order will do above and beyond that is sort of a coordination of existing coordination activities at the highest level. I think at the highest level is the critical point, because it gets buy-in at a level that will make things happen. The interest of NOAA is clear, the Vice Admiral did go to Chicago and attend the announcement of the executive order and is fully behind it.

I think one of the things that the task force could do in addition is to prioritize the issues that we know exist out there. We clearly need a prioritization of those issues, and we need to develop a prioritized strategy on how to resolve those issues. That's critically important, and once we have a prioritized strategy, we can then, when the money becomes available or when the redirection of current forces are put into place, we can all put them towards one common effort.

Mr. DUNCAN. All right. Thank you very much.

Dr. Gray?

Mr. GRAY. Mr. Chairman, I believe that the major importance of this Executive Order and the task force is to put a spotlight on the problems in the Great Lakes and to emphasize the President's concern with and priority in solving those problems. If it does that, it will have been very successful. It also calls us to put, as agencies, to coordinate our efforts even better than we have in the past in helping get this job done.

Mr. DUNCAN. All right. Ms. Thorson.

Ms. THORSON. Secretary of Interior Gale Norton has emphasized in her administration what she calls the four Cs: communication, cooperation and coordination, all in the advancement of conservation. I'm going to answer your question not only with her four Cs, but with what I think are three Ps. The first is priority, as Dr. Gray said, as many of the speakers have said, emphasizing in the

Great Lakes where we can prioritize and take advantage of one another's plans that have been done in the past.

The second is profile, that the President has recognized the importance of the Great Lakes ecosystem for the economic reasons that you've mentioned, the community reasons and as a natural resources. So priorities and profile.

But the one that the Fish and Wildlife Service is most anxious to contribute toward is partnerships. Because we are doers, on the ground. All of these plans to get them done, if we're going to eradicate sea lamprey, it's the U.S. Fish and Wildlife Service that's doing that. If we're going to save marshes, it's the U.S. Fish and Wildlife Service in partnership with States that's doing that, along with the U.S. Geological Survey, the National Park Service, and in recognition of the sovereignty of the tribes in the Great Lakes Basin, the Bureau of Indian Affairs.

So the Department of Interior is going to be a doer and not just a continued planner by using this cabinet level task force to prioritize, find out everything that's in the tool kit of all the agencies that are involved, and then act.

Mr. DUNCAN. All right. Let me tell you what we're going to do, just because there has been so much concern expressed about this, that this Executive Order doesn't just become another study. What we're going to do is one year from now, we're going to call each of you back here and ask you to tell us specifically what actions you've taken, what progress you've made. And we want something that's not just paper that's been traded back and forth.

And now let's talk just a minute about the funding. I don't know what the situation is on all of your particular agencies, but I didn't come in January like most people, but in just about five months I'll have been here 16 years. In that time, Federal spending has gone way up every year. It's gone up way above the rate of inflation, way above. And I assume it has for each of your agencies.

And so the problem has not been with the money. Now, there is competition within Government, just like there's competition in the private sector. And sometimes different offices or programs within agencies get cut back or money gets moved around. But that's because of decisions that are made within each of your agencies, or priorities that are made within each of your agencies.

That's why I was so impressed with what Dr. Gray said about this Environmental Quality Incentive Program going up from $174 million to $975 million, if I wrote those figures down correctly.

Mr. GRAY. You did.

Mr. DUNCAN. Is that correct, $174 million to $975 million?

Mr. GRAY. Yes, sir, that's correct.

Mr. DUNCAN. From 2002 until now.

Mr. GRAY. That's correct.

Mr. DUNCAN. And I made the comment, that's the biggest jump I think I've ever seen. I mean, it reminds me of a similar situation. Right after 9/11, they found out that 15 of the 19 hijackers were here illegally, the INS started saying it was underfunded and Elton Gallegly, one of our colleagues, appeared on 60 Minutes and said we'd given the INS a 250 percent increase in funding over the previous eight years. I mean, every time any Federal agency messes up, they always say they're underfunded. They're not underfunded.

It's human nature, everybody wants to make more money. Every human being wants to make more than they're making, every department or agency of any governmental organization, the Federal Government, State government, local governments, they all want more money. But Mr. Pearce made some great points. We don't just have an unlimited money supply. We've got to try to determine as best we can what money is being spent wisely, what money is being spent effectively and what money is not being spent effectively, so we don't just throw money at a problem and just waste it.

So I think, you know, there are some groups here in Washington that want to continually tell us how bad things are, so that they can get more contributions. And it's all about big money. Anyway, there was an editorial in the New Republic magazine in August of 2002. The New Republic is a liberal magazine. And it said there, to learn that the environment is in bad shape today and with the smallest push could be in disastrous shape tomorrow, that's what some people are claiming, fortunately this alarm is a false one. All forms of pollution in the United States, air, water and toxic material, have been declining for decades.

We've made great progress over the last 25 or 30 years. That's a wonderful thing. I'm glad. And we need to make more progress. But we also need to recognize that we have made progress. Some people need to admit that every once in a while.

My point is, we're providing more money for doing good things in the Great Lakes than we ever have before in history. And it's not just a little bit more, it's a whole lot more.

Now our challenge is to make sure that the huge money that we're providing for these problems in the Great Lakes is spent wisely so that we can continue to get good things done so that we don't just throw it down a rat hole and waste it. And that's your job, because you all are the key people. And I appreciate your being here for this hearing.

Mr. PEARCE. Mr. Chairman?

Mr. DUNCAN. Yes, Mr. Pearce.

Mr. PEARCE. Before you finish, I would just extend your comments one more step and ask that we as a Committee begin to look at those agencies that can and cannot quantify what they're getting for their money and begin to move funds toward the agencies that are actually measuring outcomes and seeing that the money is spent wisely. I know I've brought it up before, but I just continually harp on the Forest Service in my district that spent $2 million to build a lumber mill. Because of environmental policies, all the commercial mills had gone out of business, so the Government's funding building a lumber mill. But they gave a grant to build it where there was no source of electricity, so the plant couldn't operate.

And those failures to adequately oversee the dollars and to make sure they're spent wisely I suspect are more rampant than we would guess. So I would recommend that we as a Committee begin to really assess how much these people are measuring what they get.

Thank you, Mr. Chairman.

Mr. DUNCAN. Well, I'll tell you this. We've all got to work on this together, because I can tell you, Alan Greenspan and many, many

others have been pointing out that we're headed for some huge, huge problems in about eight or ten years' time when all the baby boomers start retiring. There is no way that we're going to be able to pay all the Social Security, Medicare, Medicaid, all these military retirees, the civil service retirees. I assume all of you are hoping to get some pretty good retirement checks here in a few years. But we're not going to be able to pay those things.

What we'll start doing is just printing a whole lot more money, then your checks won't be worth nearly as much. Everybody can see what we're headed into it and that's because we've been spending so much money so unwisely. We've got to all work together to stop that.

Well, this has been a great hearing. Thank you very much for coming. That will conclude the hearing.

[Whereupon, at 11:49 a.m., the Subcommittee was adjourned, to reconvene at the call of the Chair.]

DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS

COMPLETE STATEMENT

OF

GERALD W. BARNES
DIRECTOR, PROGRAMS DIRECTORATE
GREAT LAKES & OHIO RIVER DIVISION
U.S. ARMY CORPS OF ENGINEERS

BEFORE

UNITED STATES HOUSE OF REPRESENTATIVES
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SUBCOMMITTEE ON WATER RESOURCES AND ENVIRONMENT

ON

THE GREAT LAKES

MAY 20, 2004

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THE GREAT LAKES

Introduction

Mr. Chairman, Committee members, and distinguished guests, I am pleased to testify before you on the U.S. Army Corps of Engineers (Corps) activities within the Great Lakes Basin.

The Great Lakes system is one of our nation's most vital natural resources. The world's largest freshwater system provides millions of U.S. and Canadian residents water for consumption, transportation, power, recreation, and a number of other uses. The Corps looks forward to continuing to work with our sister Federal agencies to collaborate with States and local communities to address regional issues relating to the use, restoration and protection of this nationally significant water resource.

My comments will focus on the issues facing the physical, chemical and biological resources of the Great Lakes, Corps programs to assist State and local efforts to address many of these issues, and the Corps' coordination of these programs with international, Federal, State, and local agencies and organizations.

Great Lakes Issues

The challenges facing the Great Lakes are numerous and complex. Environmental challenges include contaminated sediments, invasive species, non-point source pollution, habitat alteration and loss, and fish and wildlife conservation. There are also many economic challenges facing the States and local communities of the Great Lakes, including aging commercial and recreational navigation infrastructure and the increasing demands for water use and consumption.

The restoration of the Great Lakes in a sustainable manner requires that all these issues be considered from a watershed perspective, emphasizing collaboration and integration, and based upon sound science. Success requires the participation of all interested parties in the planning and decision-making process. This participation would foster an open dialogue to integrate sometimes competing or conflicting water resource needs. Such integration and collaboration are indispensable to meeting water challenges.

Although primacy for water resources management in the U.S. has been and must continue to be at the State and local level, the Great Lakes are an international resource. It is therefore appropriate for the Federal government to support local and regional efforts to protect and restore Great Lakes water resources. Congress has looked to the States, and in particular the Governors, to establish the priorities for restoration. The Great Lakes Governors have done this with their set of nine priorities for management of this shared water resource. With the direction provided by these priorities, a comprehensive plan should be formulated to facilitate an effective coordination between Federal and non-Federal programs to restore the Great Lakes.

Overview of Corps Great Lakes Programs

The Corps is supporting international, State and local efforts to protect and restore the Great Lakes ecosystem through our Civil Works programs. This support includes activities directed at the three basic elements of the Great Lakes resources: physical, chemical and biological.

Physical

Undoubtedly, the most valuable physical resource of the Great Lakes is the water itself. The Corps is a member of the team that monitors, predicts and regulates water withdrawals, flows and diversions through our support to the International Joint Commission (IJC) Boards of Control. We are also supporting the IJC reference study that is re-evaluating the operating plan for Lake Ontario. This interdisciplinary, interagency study is an example of the type of effort required to balance sometimes conflicting needs for water resources, including hydropower, navigation, riparian interests, recreational users, and the ecosystem.

The Corps has developed an inventory of biohydrologic information relevant to Great Lakes water management in partnership with the Great Lakes Commission. This study will include a gap analysis of water-related data and is closely integrated with the Annex 2001 activities of the Great Lakes Governors that are developing a process for the States to manage and make decisions on new water uses and diversions.

In addition to water management, the Corps is supporting States and local partners on other aspects of Great Lakes physical resources, including land management, erosion protection and soil conservation. Through the Great Lakes Tributary Model program (Sec 516e, WRDA 96), the Corps is developing watershed models for Great Lakes tributaries to provide a tool for State and local land managers to evaluate the impacts of land use practices and optimize their soil conservation and erosion prevention efforts.

Chemical

Contaminated bottom sediments are a most difficult part of the chemical issues facing the Great Lakes resources. Through partnerships with States, port authorities and local governments, the Corps has removed over 90 million cubic yards of contaminated sediments from Great Lakes ports and navigation channels and managed these materials in confined disposal facilities, or CDFs. Over 70 million cubic yards of these contaminated sediments were removed from Great Lakes Areas of Concern. The contribution of this massive removal of contaminated sediments to Great Lakes restoration goals is often overlooked.

In addition to removal of contaminated sediments for navigation, the Corps is working with States and local groups to perform sediment cleanups through our Environmental Dredging program (Sec 312, WRDA 90). The Ashtabula River Partnership is a collaboration of Federal, State, local and industrial partners that have joined forces to clean-up contaminated sediments from the Ashtabula River Area of Concern using this program. We are also currently working on feasibility studies for environmental dredging in collaboration with the States of Wisconsin and Indiana on Fox and Grand Calumet Rivers.

Through our Great Lakes Remedial Action Plans, or RAP program (Sec 401, WRDA 90), the Corps' expertise in management of contaminated sediments is being used to support the planning and design of sediment cleanup projects by States and local RAP groups. Sediment cleanup plans developed through this program are being proposed for construction under the EPA's Great Lakes Legacy Act.

The Corps has provided technical support to our sister Federal agencies in their programs dealing with contaminated sediments. We have worked closely with EPA's Great Lakes National Program Office to evaluate and demonstrate new and improved technologies for managing contaminated sediments. We have supported EPA Regional offices on Superfund projects that involve contaminated sediments. We have supported the Fish & Wildlife Service on a sediment cleanup project in the Saginaw River, and we are currently beginning support to EPA's Great Lakes Program Office for their Great Lakes Legacy Act program.

Biological

The Corps has collaborated with international, State and local agencies and organizations to address biological threats to the resources of the Great Lakes. The most visible of these efforts is the invasive species dispersal barriers on Chicago Sanitary and Ship Canal. For this project, the Corps assembled an advisory panel with experts from Federal, State, local governments and academia to screen technologies and provide recommendations on design and operation of the barrier.

The Corps is also supporting the efforts of States, tribes and the Great Lakes Fishery Commission to battle the sea lamprey through construction of barriers at various Great Lakes tributaries to prevent the migration of these invaders to spawning areas.

The Corps is partnering with States and tribes on the Great Lakes Fishery & Ecosystem Restoration program (Sec 506, WRDA 00). Under this program, a series of individual projects will be planned, designed and built to restore and enhance aquatic habitat , which will aid in the restoration of the Great Lakes Basin. An operating plan for this program was developed in collaboration with the Great Lakes Fishery Commission and utilizes the strategic plan for Great Lakes fisheries developed by States, provinces and tribes as the guiding path for the program.

Interagency Coordination

The size and importance of the Great Lakes water resource and the complexity of the challenges before it necessitate a team approach to its management. The Corps has worked as a team member, as well as team leader, in different aspects of the collective environmental programs for the Great Lakes Basin.

The Corps and EPA jointly conducted one the first ecosystem restoration plans ever performed, over 30 years ago on Lake Erie. We are a member of the U.S. Policy Committee, led by the EPA, and participated in the development of their 2002 Strategic Plan to coordinate implementation of the Great Lakes Water Quality Agreement by Federal and state agencies.

The Corps has led or participated in several reference studies of the IJC dealing with lake levels and water management. The Corps is currently engaged in a U.S.-Canadian collaborative study of the existing navigation infrastructure in the Great Lakes and St. Lawrence Seaway in partnership with the U.S. Department of Transportation, Fish and Wildlife Service, Transport Canada, Environment Canada and the U.S. and Canadian Management organizations for the St. Lawrence Seaway. This study will establish the baseline conditions of the existing infrastructure, commercial navigation use, and the environmental conditions of the Lakes and St. Lawrence River.

On Tuesday, Mary 18, 2004, President Bush issued an Executive Order establishing a Great Lakes Interagency Task Force to promote regional collaboration of national significance for the Great Lakes. We look forward to working closely with the other Federal agencies on this Task Force to establish a regional collaboration to assure the sustainable use and protection of this vital resource.

Conclusion

The Corps is pleased to have had the opportunity to appear before you and provide an overview of our projects and studies of importance to the Great Lakes. We value highly the water resources of the Great Lakes, the partnerships we have formed with our sister Federal agencies, the Canadians, the Great Lakes States, Tribes, local governments and stakeholder groups in managing and protecting this unique resource.

The Corps looks forward to continuing these partnerships. Mr. Chairman, this concludes my remarks. I would be happy to answer any questions.

WRITTEN TESTIMONY OF

DR. STEPHEN B. BRANDT
DIRECTOR, GREAT LAKES ENVIRONMENTAL RESEARCH LABORATORY
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
U.S. DEPARTMENT OF COMMERCE

BEFORE THE

SUBCOMMITTEE ON WATER RESOURCES AND ENVIRONMENT
OF THE
HOUSE TRANSPORTATION AND INFRASTRUCTURE COMMITTEE
UNITED STATES HOUSE OF REPRESENTATIVES

May 20, 2004

Mr. Chairman, and Members of the Subcommittee, good morning, and thank you for inviting me to discuss the contributions made by the National Oceanic and Atmospheric Administration (NOAA) to water quality improvement and restoration in the Great Lakes, and coordination of such actions with other federal agencies and state and local governments. I am Dr. Stephen Brandt, Director of NOAA's Great Lakes Environmental Research Laboratory (GLERL), headquartered in Ann Arbor, Michigan.

The Great Lakes are one of the earth's greatest treasures and one of the Nation's most important aquatic resources from an economic, geographic, international, ecological, and societal perspective. Many complex challenges lie ahead for the Great Lakes. The Great Lakes continually face extremes in natural phenomena such as storms, erosion, high waves, high and low water levels, and climate variability, all of which influence water quality and efforts to restore habitat. Population growth in the region will continue to increase stresses on the Great Lakes, adding to the complexity of management issues. The one thing that we can predict with near certainty is that the Great Lakes ecosystem will continue to change and pose a challenge for effective use and management.

On Tuesday, May 18, 2004, President Bush issued an Executive Order establishing a Great Lakes Interagency Task Force to promote regional collaboration of national significance for the Great Lakes. The Department of Commerce is one of the federal agencies on this interagency task force, and the Department looks forward to working with our partners in the federal government, and with state and local interests in the Great Lakes region.

In the early 1970s when Lake Erie was declared dead, the solution, based on best available science, was relatively clear: nutrient loading must be reduced. Our ecological understanding and technological know-how have significantly improved since the 1970s. The Great Lakes have a large, complex and economically important user base and are heavily impacted by

human activities with resultant multiple stresses. Many parts of the lakes are highly eutrophic and have needs for ecological prediction in oxygen deficiency, harmful algal blooms, recreational and commercial fisheries production, invasive species and extreme natural events (high winds, storms, dramatic changes in water influx). It is clear that future successes will depend on a holistic, ecosystem approach.

NOAA's ROLE IN THE GREAT LAKES

NOAA's mission is: "To understand and predict changes in the Earth's environment and conserve and manage coastal and marine resources to meet our Nation's economic, social and environmental needs." One of NOAA's four primary goals is to, "Protect, restore and manage the use of coastal and ocean resources through ecosystem-based management." NOAA has environmental stewardship, assessment, and prediction responsibilities in the Great Lakes. NOAA conducts physical, chemical, and biotic research and environmental monitoring and modeling, providing scientific expertise and services to manage and protect Great Lakes ecosystems. The research NOAA conducts helps improve the understanding and prediction of Great Lakes processes, including the interdependencies with the atmosphere, water and sediments. In addition, all of NOAA's offices play a vital role to support the economy of the Great Lakes through NOAA's strategic themes, i.e., ecosystem, weather and water, climate, commerce and transportation.

The Great Lakes ecosystem is one of the most clearly definable regional entity under NOAA's purview and mission responsibilities, and it has a long history of interagency partnerships and collaborations. The Great Lakes region has also led the nation for decades in innovative management strategies that have spanned thousands of miles, and provide a large-scale testing ground for new science and management.

NOAA has over 15 Congressional mandates that guide its specific ecosystem research and water quality and restoration responsibilities in the Great Lakes. NOAA is mandated to provide research, monitoring and coordination throughout the Great Lakes Basin on ecosystem issues such as water resources, invasive species, foodweb dynamics, pollutants, hydrology, hydrodynamics, ice, water quantity and quality and so forth. NOAA's programs in the Great Lakes work in partnership with one another, and with other federal and state agencies to provide comprehensive science, management, and technical assistance tools to foster comprehensive environmental stewardship of the area.

Several of NOAA's activities in the Great Lakes specifically relate to water quality improvement and restoration. For example, NOAA:

- Predicts impacts of pollution and coastal development on sensitive habitats and resources, including maintaining contaminant-monitoring sites in Green Bay, and Lakes Michigan, Huron, St. Clair, Erie and Ontario to determine contaminant trends;
- Works with states to analyze changes in coastal land cover and plan habitat restoration and conservation;

- Collects, analyzes and distributes historical and real-time observations, and predictions of water levels, coastal currents and other meteorological and oceanographic data;
- Provides scientifically sound information on ecosystem processes to improve management decisions and mitigate human impacts;
- Develops and implements techniques and products to improve severe storm forecasting, and provides the weather and flood warnings, forecasts, and meteorological and hydrologic data used by research, environmental management, transportation, and community interests in the Great Lakes;
- Provides surveying, nautical charts, and other navigation services for safe shipping and boating;
- Acts on behalf of the Secretary of Commerce as a natural resource trustee for the public to protect and restore aquatic species and their habitats, and associated services such as safe navigation and transportation, recreation, commercial fishing, shoreline stabilization, and flood control;
- Partners with universities through the National Sea Grant College Program and the Great Lakes Environmental Research Laboratory to encourage stewardship of Great Lakes coastal natural resources by providing funding to, and conducting joint projects with area universities for research, education, outreach and technology transfer;
- Partners with state Coastal Zone Management programs to work with local communities and state agencies to preserve, protect, develop, restore, and enhance coastal zone resources, providing research, education, and protection of coastal and estuarine areas; and,
- NOAA's environmental satellites and NOAA's National Data Centers support Federal, state and local efforts that contribute to the Great Lakes economy and environmental monitoring. The Great Lakes CoastWatch node provides observations in the Great Lakes and supports thousands of users with the following typical applications: fisheries management, recreational fisheries support, water quality, education/research, and transportation enhancement. Support for the developing Integrated Ocean Observing Systems Regional Alliances in the Great Lakes will come from NOAA CoastWatch. Additionally, NOAA's Satellites and Information Service, in cooperation with the U.S. Navy and U.S. Coast Guard, operates the National Ice Center (NIC). The NIC is responsible for producing Arctic and Great Lakes ice analyses and forecasts that support a variety of customers in the Great Lakes region. For example, the NIC's weekly ice analyses are used by both the U.S. and Canadian Coast Guard to assess the ice conditions across the entire Great Lakes region. NIC also supports state governments in the Great Lakes Basin with specialized support, as necessary.

Currently, NOAA is appointed to chair the International Joint Commission's Council of Great Lakes Research Managers. The International Joint Commission has overall water quality responsibilities for the Great Lakes. The Council of Great Lakes Research Managers has responsibilities to coordinate Great Lakes Research related to water quality. As one example of their efforts, the Council hosted an international, interagency workshop on April 28-30,

2004, to set up a formal framework for a Research Coordination Strategy for the Great Lakes. They will also be hosting a workshop this fall to set up an integrated, international buoy-based observing system for research in the Great Lakes.

NOAA restoration activities include wetlands banking, rehabilitation of Brownfields sites, restoration of coastal wetlands and other habitats, establishing protected areas, using dredged material to enhance fish and wildlife habitat, improving water quality, fisheries management, and prevention and control of invasive species.

NOAA's restoration role includes advising on cleanup of contaminated sites, working with states and others to fund habitat restoration projects, and conducting research and monitoring activities. The issues involved in large contaminated sediment sites are multifaceted and often controversial, resulting in assessments and cleanups that can take ten or more years to complete. NOAA, through the Coastal Resource Coordination program, works with our partner agencies to promote remedies that will protect the aquatic environment, build restoration into clean up actions, and reduce overall injury to natural resources to speed their recovery. By working cooperatively at sites with cleanup and trustee agencies, local groups, and potentially responsible parties, NOAA decreases contaminant loads, reduces risks to protect sensitive species, and improves and restores habitat function. In addition to cleanup, there is often a need to restore natural resources that have been injured by contaminant releases. This can be accomplished through NOAA's trustee authority to cooperatively address liability, to assess natural resource damages, and to restore natural resources. NOAA is currently working on cleaning up and restoring 15 hazardous waste sites in the Great Lakes region. One example is the Fox River Superfund Site in Wisconsin, where the trustee agencies completed a final Joint Restoration Plan and Environmental Assessment for the Lower Fox River and Green Bay in June 2003. One settlement for natural resource damages at the site provides for the immediate acquisition and protection of more than 1,060 acres of wetland and upland habitat, and $8.5 million for additional habitat acquisition and protection, specific recreational enhancement projects, and other water quality improvement, fishery enhancement, and habitat improvement projects, consistent with the site restoration goals.

NOAA partners with state governments through the Coastal Zone Management program, a unique, voluntary federal-state partnership that provides a proven basis for protecting, restoring, and responsibly developing the Nation's important and diverse coastal communities and resources. The Coastal Zone Management Act balances state and national interests in the management of our unique coastal resources, for conservation and responsible development. A major premise of the Coastal Zone Management Act is that the management of uses and resources of the coastal zone is best achieved at the state and local level, within a national framework. Great Lakes state Coastal Zone Management programs support and coordinate with local governments, tribal agencies, and community organizations on developing watershed management plans and protecting and managing critical coastal areas, such as coastal wetlands.

Through the Coastal Zone Management program, NOAA supports states, including all Great Lakes states except Illinois, through financial assistance, mediation, technical services and

information, and participation in state, regional, and local forums to improve water quality, provide public access to coastal resources, manage coastal hazards, restore coastal habitat, and integrate coastal management at a local level. NOAA is also currently working with coastal states to develop a national coastal management performance measurement system. The first phase of the project, a national framework, was completed in June of 2003. A joint state-federal working group has been established to identify specific indicators that will show the results of coastal management efforts in the states.

An example of recent restoration efforts is the Great Lakes Coastal Restoration Grant program, which was funded through a $30 million appropriation in fiscal year 2001. More than 70 local government units have partnered in this program and are working on a variety of restoration projects, including contaminated sediment cleanup, invasive species removal, dune and marsh restorations, acquisition of critical habitat, and storm water management projects.

The following are examples of projects funded through the Great Lakes Coastal Restoration Grants:

- In Geauga County, OH, the Geauga Park District was awarded $190,000 in federal funding to restore Silver Creek, reduce bank erosion, create wetland habitat areas, and reduce sediment transport downstream.
- The Indiana Department of Natural Resources (IDNR) received $100,000 in federal funding to restore wetland habitat in the Dunes Creek watershed in Porter County, Indiana. The project further evaluated the project's impact in reducing loadings of the bacteria *E.coli* to the beaches at Indiana Dunes State Park. The Save the Dunes Council is working with the IDNR, Indiana Geological Survey and the National Lakeshore on this project.
- A grant for approximately $340,000 was made to the City of Duluth, Minnesota to complete the cleanup of solid waste dumped on the bank of Sargent Creek, a tributary to the St. Louis River. The remediation removed approximately 50,000 tons of waste material from the stream, stream bank, and ravine.

NOAA promotes a science-based approach to water quality improvements and restoration and NOAA's research provides critical information toward this end. NOAA conducts a variety of research and monitoring applicable to restoration and water quality and coordinates activities on significant intergovernmental issues. GLERL conducts research applicable to water quality improvement and restoration and coordinates significant intergovernmental issues. NOAA's partnership with Sea Grant Colleges, government, and the private sector offers an integrated program of research, education, and technical assistance that promotes the restoration of degraded coastal habitat.

GLERL is NOAA's largest presence in the Great Lakes. It is a multi-disciplinary coastal laboratory that has taken an ecosystem approach. Its mission is to "conduct high-quality research and provide scientific leadership on important issues in both Great Lakes and marine coastal environments leading to new knowledge, tools, approaches, awareness and service." GLERL provides a solid scientific understanding and leadership for wise use and

management of Great Lakes and coastal marine environments. GLERL's research includes water quantity, water quality, water level predictions, waves, ice, circulation, climate change, contaminants, coastal observations and forecasting, satellite imagery, sediment movements, food webs, environmental and ecological prediction, and invasive species. GLERL staff are encouraged to develop cooperative research projects with other agencies focused on specific major environmental issues in keeping with NOAA's mission and goals. GLERL has a long tradition of partnerships and currently has active programs with over 150 institutions spread across 27 states, 19 federal agencies, 50 universities and a number of state, private, local and foreign agencies. The NOAA Cooperative Institute for Limnology and Ecosystem Research based at the University of Michigan allows NOAA to work effectively with any Great Lakes Basin University.

NOAA Sea Grant university scientists develop and implement methods to restore habitat, protect the public and improve water quality. NOAA Sea Grant extension agents deliver credible science-based information to the public and empower coastal communities to undertake well-planned coastal development that preserves and promotes restoration of critical coastal habitats. For example, Wisconsin's Brown County, with funding from the U.S. Army Corps of Engineers, is rebuilding the Cat Island chain of barrier islands in Green Bay to restore these important habitats for fish and wildlife. Sea Grant habitat restoration and coastal engineering specialists have provided habitat designs, identified potential water quality impacts, and helped determine acceptable PCB levels in the dredged material used for construction of the islands. Other examples of Sea Grant activity include:

- Sea Grant outreach specialists work to be sure the risks from contaminants in the environment and in seafood are communicated to the public. In Indiana and Illinois, seafood advisories are being translated into three languages to reach an additional half-million people who have difficulty with English, some of whom rely on fish for a large portion of their diet.

- Sea Grant played a significant role in the early stages of Chicago's Calumet Restoration Initiative, a plan to rejuvenate what was once a major wetland complex by reviving the industrial sector as well as cleaning up contaminated marshes, wetlands, and industrial sites. A Sea Grant funded study identified three candidate sites in the Calumet area for concurrent brownfield redevelopment and ecological rehabilitation, one of which has now been chosen for the future site of the project's environmental center. The planning of the Ford Calumet Environmental Center has involved the input of a diverse assemblage of environmentalists, community groups, industry representatives, bird watchers and educators.

- The Ohio Sea Grant College Program is developing the Ohio Clean Marinas Program, a proactive partnership designed to encourage marinas and boaters to use simple, innovative solutions to keep Ohio's coastal and inland waterway resources clean. The Program assists these operators in protecting the resources that provide their livelihood — clean water and fresh air. The basic goal of the Program is pollution prevention by making marinas and boaters more aware of environmental laws, rules and jurisdictions, and to get

as many marinas as possible to follow best management practices and to be designated as "Clean Marinas." The Ohio Clean Marinas Program is a partnership with the Ohio Department of Natural Resources, Division of Soil and Water Conservation (Ohio Coastal Management Program) and Division of Watercraft; Ohio Department of Health; Ohio Environmental Protection Agency; U.S. Coast Guard; U.S. Army Corps of Engineers; Lake Erie Marine Trades Association and marina and yacht club owners and managers.

Aquatic invasive species are a global threat that affects the economic security, management, and uses of our coastal ecosystems. To maximize the benefits and effectiveness of NOAA's research investments towards understanding, preventing, responding to, and managing aquatic species invasions in U.S. coastal ecosystems, the agency established the NOAA National Center for Research on Aquatic Invasive Species in July 2003. The Center is a virtual center for the matrix-managed coordination of existing research programs throughout NOAA and is administratively housed at the Great Lakes Environmental Research Laboratory in Ann Arbor, Michigan. The Center will foster partnerships to address prevention, early detection, rapid response, and management of invasive species, major restoration and water quality issue for Great Lakes ecosystems.

The major pathways by which aquatic invasive species (AIS) reach U.S. ecosystems all involve human activities, especially commerce and trade. Costs to the U.S. economy of AIS have reached 100s of millions of dollars per year and are mounting. Solutions to problems related to AIS will undoubtedly affect both the costs and policies related to commerce and trade. Congress, in the Aquatic Nuisance Prevention and Control Act of 1990 (P.L. 101-646) and the White House (Executive Order 13112, Invasive Species, February 1999) identified aquatic species invasions as a growing national problem requiring federal action.

NOAA is one of several federal agencies given joint responsibility for developing and implementing a national invasive species response and action plan. NOAA serves as co-chair of both the national Aquatic Nuisance Species Task Force and the Invasive Species Council. Therefore, it is appropriate and essential that NOAA assures the effectiveness, and maximizes the value, of its research investment on this issue. Coordination and advocacy for research within NOAA as well as across agencies, and partnering with the academic and private sector are essential to achieving this goal.

NOAA also provides monitoring and other information useful for evaluating restoration needs and success. For example, NOAA's Mussel Watch Program analyzes contaminant levels in mussel tissue and sediments as a means of tracking the health of Great Lakes ecosystems. NOAA is also developing land cover data for the entire coastal zone of the U.S. Great Lakes. The land cover data are being developed for 2001, along with retrospective land cover for 1996, to identify changes in the landscape. These regional data sets can help coastal managers monitor urban sprawl and changes to natural resources, inventory wetland and wildlife habitat, and develop trend analyses.

NOAA is supporting restoration planning for the Great Lakes through grants to the Great Lakes Commission and the Northeast-Midwest Institute. In partnership with the Great Lakes

Sea Grant Network, they are providing technical and scientific support to the Region's leadership in the development of a comprehensive ecosystem restoration plan. The Institute is reviewing the approaches that other regions have used to launch major ecosystem restoration initiatives in order to provide guidance for Great Lakes planning efforts. The Commission and the state Sea Grant Programs are facilitating a series of state and province focus groups culminating in a Great Lakes Restoration forum that will identify restoration priorities and associated strategic actions. State workshops have already been held in Michigan, Pennsylvania, Ohio, Indiana, and New York, and will be scheduled for the other Great Lakes states later this year. This effort will help unify the many existing strategic plans from partner agencies. NOAA is working in partnership with EPA, states, and others in this effort.

The Estuary Restoration Act (ERA) (P.L. 106-457) was passed in 2000 to provide financial and technical assistance for restoration projects, and to facilitate coordination among federal and private entities that conduct restoration activities. The Interagency Estuary Habitat Restoration Council (consisting of delegates from NOAA, EPA, Department of the Army, Fish and Wildlife Service, and Department of Agriculture) administers the directives of the ERA. The nearshore waters and wetlands of the Great Lakes are classified as estuaries under the ERA, meaning that these habitats and their associated ecosystems are eligible for Estuary Habitat Restoration Program funding. As part of its responsibilities under the ERA, NOAA has developed a national database of restoration projects, including information on project goals, restoration techniques, and monitoring results. The database, released in early 2004, is publicly accessible over the Internet. As part of our responsibilities under the Estuary Restoration Act, NOAA has also developed monitoring protocols to better assess the success of monitoring restoration projects, which should be applied to restoration efforts in the Great Lakes. These monitoring protocols include a core set of indicators of ecosystem function specific to each habitat type to allow an accurate evaluation of restoration results.

Some other NOAA activities include:

- NOAA operates the Great Lakes component of the National Water Level Observation Network, which comprises 51 water level stations located on the Great Lakes-St. Lawrence system. Water level and other environmental data supplied by the Observation Network are used by a number of federal agencies and other users for safe navigation, storm surge warning, water level regulation for hydroelectric power, forecast models, coastal resource management, and habitat restoration. This information also supports international treaty commitments with Canada.

- NOAA's Navigation Response Teams conduct hazardous obstructions surveys using diving operations, data collection and mapping to support capabilities throughout the coastal United States, including the Great Lakes.

- Old Woman Creek National Estuarine Research Reserve, located on the south-central shore of Lake Erie, was designated as the seventh National Estuarine Research Reserve in 1980. The smallest and only freshwater reserve in the National Estuarine Research Reserve System, the 571-acre reserve serves as a field laboratory where

scientists can study naturally functioning systems and where students and the general public can learn about estuarine ecology in a natural setting.

- NOAA has maintained strong collaborations with the University of Wisconsin's Cooperative Institute for Meteorological Satellite Studies (CIMSS). The partnership between NOAA and CIMSS has resulted in advances in the use of remote sensing systems for meteorological and environmental satellite-based applications.

- The 448-square mile Thunder Bay National Marine Sanctuary and Underwater Preserve, located off the coast of Alpena, Michigan in Lake Huron, was designated in 2000 and protects and provides interpretive information on approximately 160 historic shipwrecks.

- NOAA data, in the form of accurate water level and vertical elevation information, play a key role in successfully restoring and sustaining healthy wetland ecosystems. Wetland vegetation is sensitive to the frequency and duration that it is inundated, suggesting that understanding the hydrodynamics of the system is essential to the proper design and engineering of a restoration project. This information is used to determine where to appropriately plant the different vegetative species.

- NOAA coordinates with EPA Headquarters and Regional offices to develop and implement the Coastal Non-point Source Pollution Control Program within the Great Lakes region. This program, authorized under the Coastal Zone Management Act, uses best available management measures to prevent and control the addition of pollution to coastal waters from five major categories of non-point pollution: agricultural, urban (including septic systems), forestry, marinas, and hydromodification. Measures were also developed to protect and restore wetlands and riparian areas, and promote the use of vegetated treatment systems.

- NOAA maintains a Hazardous Materials Scientific Support Coordinator in the Great Lakes who coordinates scientific information necessary for response to a spill of oil or other hazardous material. This support includes identification of natural resources at risk from the pollution incident, the fate and effect of the pollutant, and the development of effective restoration actions. In addition to this 24/7 response coverage, the Scientific Support Coordinator trains and drills with industry, federal, state and local response personnel within the region, providing an integral link among these agencies. All this combines to ensure rapid and appropriate response to events that threaten the water quality of the Great Lakes.

SUMMARY

In summary, NOAA agrees that water quality improvement and restoration of the Great Lakes ecosystem are complex and challenging tasks. Although many federal, state, and local programs are already working together on this task, NOAA remains committed to continued improvements in coordination to help all partners to more effectively work together to restore the Great Lakes ecosystem. The complexity of the issue and the large numbers of specific projects that are being developed to address environmental problems in the Great Lakes have complicated tracking of progress toward achieving restoration goals. More consistent performance metrics among the involved agencies, improved prediction of ecosystem change, and better coordination of monitoring would facilitate reliable evaluation of progress toward regional restoration goals.

Also, it is NOAA's belief that water-quality improvements and restoration need to be based on the best available science and that an ecosystem-based management approach is essential. Our research in the Great Lakes takes a proactive approach and is focused on predicting ecosystem response to management decisions. By predicting the effects of biological, chemical, physical and human-induced changes (extreme natural events, climate change, land and resource use, pollution, invasive species, fisheries impacts and interactive effects) on ecosystems and their components, decision makers will be better tooled to make economically and ecologically sound decisions.

Thank you again for inviting me to present this overview of NOAA's current contributions to water quality improvements and restoration in Great Lakes ecosystems. I would be happy to answer any questions you might have.

Introductory Statement of Representative Vernon J. Ehlers
Water Resources Subcommittee hearing on Great Lakes Restoration
May 20, 2004

Thank you, Mr. Chairman. I appreciate you holding this very important hearing today and for your understanding of the many environmental challenges facing the Great Lakes.

I am eager to hear from administration witnesses about their projects and programs to help protect and restore the national treasure that is the Great Lakes. We are likely hear about an Executive Order just signed by President Bush on Tuesday that establishes a task force to improve the coordination of federal agency efforts and to reach out to state, local, and private partners to develop consistent policies and strategies for Great Lakes restoration.

I strongly support the actions taken by President Bush, EPA Administrator Leavitt, and CEQ Chairman Connaughton. This is a very helpful step. And I am pleased to announce that this week I will introduce Great Lakes restoration legislation in the House.

We know from the April 2003 GAO Report that several federal, state, provincial and local programs have been developed to address the many environmental challenges in the Great Lakes, but that these strategies are not well coordinated. We lack an overarching strategy and coordinating body to establish goals, identify the resources needed to reach those goals, outline how restoration will occur, and accurately measure our progress.

My bill, the Great Lakes Protection and Restoration Committee Act, will provide a path forward by bringing together all of the stakeholders in the basin, led by the Great Lakes State governors

with the aid of relevant federal agency officials, tribal representatives, scientific experts and environmental and industry stakeholders. The Committee created by the legislation will develop a specific and comprehensive strategy for the purpose of protecting, preserving and restoring the Great Lakes.

Specifically, the task force will:

- ✓ Assess accomplishments from current programs over the past 10 years;
- ✓ Analyze the prospects for achieving restoration goals under current programs and authorities for the next 10 years;
- ✓ Prioritize restoration goals identified by the Great Lakes governors;
- ✓ Develop specific, measurable benchmarks for achieving those goals;
- ✓ Recommend legislative options for obtaining such additional authority and funding as are necessary to achieve those goals;
- ✓ Suggest methods to improve coordination among the existing federal, state, provincial, local, and non-governmental programs operating in the Great Lakes; and
- ✓ Report to Congress and the President in one year on its findings and recommendations.

My goal is that the task force will develop a comprehensive strategic protection and restoration program to bring together and coordinate the plethora of smaller programs we have now.

This serious and measured approach mirrors the steps taken in other large ecosystem restoration

projects such as the Everglades and Chesapeake Bay. Due to the complexity of those restoration initiatives, which crossed over many jurisdictional lines, environmental challenges and scientific disciplines, it was essential to have an overall strategic plan in place to guide activities and funding decisions over long periods of time. The Great Lakes Basin is significantly larger and the environmental challenges substantially more complex than in those ecosystems. We need an overarching strategy in place to accomplish our vision to protect and restore the lakes.

A lack of adequate funding is certainly an impediment to successful cleanup efforts, but improved program coordination and operation under a comprehensive strategic plan is an essential first step. The Great Lakes Protection and Restoration Committee Act will move Great Lakes restoration forward to help protect and clean up this global treasure. I urge all of my colleagues to support this legislation.

Thank you, Mr. Chairman, and I look forward to hearing from the witnesses.

STATEMENT OF DR. MACK GRAY
DEPUTY UNDER SECRETARY FOR NATURAL RESOURCES AND ENVIRONMENT
UNITED STATES DEPARTMENT OF AGRICULTURE
BEFORE THE
HOUSE TRANSPORTATION AND INFRASTRUCTURE COMMITTEE
SUBCOMMITTEE ON WATER RESOURCES AND ENVIRONMENT
May 20, 2004

Mr. Chairman, thank you for the opportunity to appear here today to discuss conservation activities in the Great Lakes Basin. I would first like to state that I am very pleased that the U.S. Department of Agriculture (USDA) has been included in the Great Lakes Interagency Task Force announced by the President on May 18, 2004. The Task Force will be an excellent forum to exchange information about resource needs and share information about the Great Lakes. We, at USDA look forward to active participation on the Task Force.

Two years ago, we witnessed enactment of one of the most important pieces of conservation policy in the 2002 Farm Bill. The legislation responds to a broad range of emerging conservation challenges faced by farmers and ranchers, including soil erosion, wetlands conservation, wildlife habitat improvement, and farm and ranchland protection. Private landowners will benefit from a portfolio of voluntary assistance, including cost-share, land rental, incentive payments, and technical assistance. The Farm Bill places a strong emphasis on the conservation of working lands – ensuring that lands remain both healthy and productive.

The Farm Bill provided an increase of more than $17 billion in investment in conservation program funding for a range of programs including the Environmental Quality Incentives Program, Wildlife Habitat Incentives Program, Wetlands Reserve Program, and Farm and Ranch Lands Protection Program, just to name a few. For each of these initiatives, and many additional programs included in the Farm Bill Conservation Title, water quality benefits result from our work either directly or indirectly. Also, the Department's new Conservation Security Program's watershed approach will make many important contributions to water quality and ecosystem health in the Great Lakes Basin in the future.

Program Examples

An excellent example of a program that has positive effects on water quality in the Great Lakes Basin is the Environmental Quality Incentives Program (EQIP) . EQIP provides a voluntary conservation program for farmers and ranchers that promotes agricultural production and environmental quality as compatible national goals. EQIP offers financial and technical help to assist eligible participants install or implement structural and management practices on eligible agricultural land. Assistance in this program takes the form of a cost-share payment, and can include such diverse projects as implementation of nutrient management systems, installing cover crops and grassed waterways to reduce erosion and sedimentation, as well as improving water-use management. The program has increased in funding to a level of $975 million for the current Fiscal Year.

As an example of an innovative EQIP project in the Great Lakes Basin, the Keweenaw Bay Indian Community (KBIC) located on Lake Superior's Keweenaw Bay in Michigan's Upper Peninsula completed a USDA Tribal EQIP contract which funded a large arched culvert. The culvert now allows fish passage into Zeba Creeks 3.2 sq. mile upper watershed area. The eight foot tall aluminum culvert's installation was a product of collaboration by many partners and will allow the Tribe's stocked fish as well as the indigenous fish species access to Lake Superior, greatly enhancing the support fishery in Keweenaw Bay.

Great Lakes Provision of the Farm Bill

The 2002 Farm Bill included provisions for a Great Lakes Basin Program for Soil Erosion and Sediment Control. The legislative language called for the Secretary to coordinate with the Great Lakes Commission as well as the Administrator of the Environmental Protection Agency and the Secretary of the Army in carrying out sediment and erosion control activities.

Great Lakes Basin Program

Within funds appropriated for the NRCS Conservation Operations Account, the agency prioritizes funding, including direction provided by earmarks, to support Great Lakes conservation activities. Funding provided through this initiative is directed to support

planning and implementation of Best Management Practices (BMPs) in the Great Lakes Basin. The project is carried out in direct cooperation with the Great Lakes Commission. A ten year history of Conservation Operations funding support is outlined as follows:

FY'95	$250,000
FY'96	$710,000
FY'97	$710,000
FY'98	$710,000
FY'99	$500,000
FY'00	$600,000
FY'01	$725,000
FY'02	$1,250,000
FY'03	$2,500,000
FY'04	$2,500,000

In addition to supporting land conservation treatment methods, the program provides regional information and education to developers, contractors, homeowners and to the public. A competitive annual grants program is one of the program's biggest success stories. Basin Program demonstration grants have involved hundreds of community volunteers in watershed improvement projects.

Cooperative Efforts

The USDA Forest Service works closely with the USDA Natural Resources Conservation Service to provide high quality public service and land management throughout the Great Lakes watershed. Eight National Forests fall either wholly or partly within the Great Lakes watershed, totaling nearly 7 million acres, about 9% of the federally administered land in the basin. The Forest Service has strong cooperative programs throughout the Great Lakes states and the North Central and Northeastern Research Stations have robust

programs researching many physical, social, and economic aspects of natural resource management.

The Forest Service and NRCS are federal partners in the Lake Superior Binational Program (LSBP). The Forest Service manages four National Forests and over three million acres within the Lake Superior basin. The LSBP was signed into agreement by the Canadian and U.S. federal governments, the Province of Ontario and the States of Michigan, Minnesota, and Wisconsin. The LSBP works under the auspices of the 1978 Great Lakes Water Quality Agreement between Canada and the U.S. Invited to participate by the lead U.S. agency (Environmental Protection Agency) in the early 1990's, the Forest Service is an active partner in this endeavor. Activities include wildlife, fisheries, soil productivity, and water quality and watershed management.

Allocation of Funds

USDA does not specifically direct the use of NRCS program resources from National Headquarters. Instead, program allocations are made to State Conservationists, who, in turn, consult with their respective State Technical Committee and other local stakeholders to meet the priorities in that state. We term this method a locally-led approach to conservation program delivery. Since program funds are not distributed on a Regional or Basin-scale, it is difficult to quantify precise project dollars for the Great Lakes.

A program by program funding total for states adjacent to the Great Lakes is as follows:

Environmental Quality Incentives Program

State	FY 2004 Funding
Illinois	$16,729,200
Indiana	$11,599,400
Michigan	$17,463,300
Minnesota	$29,423,700
New York	$12,484,700
Ohio	$13,412,400
Pennsylvania	$11,853,900
Wisconsin	$18,960,500

Wildlife Habitat Incentives Program

State	FY 2004 Funding
Illinois	$525,000
Indiana	$525,000
Michigan	$525,000
Minnesota	$562,000
New York	$525,000
Ohio	$525,000
Pennsylvania	$300,000
Wisconsin	$628,000

Wetlands Reserve Program

State	FY 2004 Funding
Illinois	$20,175,500
Indiana	$12,140,000
Michigan	$9,340,000
Minnesota	$14,850,000
New York	$6,680,000
Ohio	$3,700,000
Pennsylvania	$267,000
Wisconsin	$6,360,000

Farm and Ranch Lands Protection Program

State	FY 2004 Funding
Illinois	$1,668,200
Indiana	$860,700
Michigan	$2,433,900
Minnesota	$860,600
New York	$2,863,900
Ohio	$2,679,600
Pennsylvania	$4,074,350
Wisconsin	$2,088,000

Assessing Our Gains

While we have excellent information about how our resources are distributed with respect to contract and project data, it is challenging for any natural resource agency to fully quantify the resource outcomes for those programs. As a result, NRCS has initiated the Conservation Effects Assessment Project (CEAP), which is being carried out by the NRCS along with several other federal agencies. The objective of this effort will be to directly attribute natural resource impacts on a program by program and project by project basis, which will, in turn, provide decision-makers with a scientific accounting of environmental benefits achieved through conservation programs.

As an example of this effort in the Great Lakes, there is an effort to address water quality problems through improving existing agricultural drainage management as part of a systems approach. This involves not only NRCS, but also the Agriculture Research Service , the Cooperative State Research Education and Extension Service, and scientists at several land grant universities. Specifically, drainage practices are being evaluated in some of the participating watersheds that have direct impact on the Great Lakes with an emphasis on nitrogen levels in the watersheds. State and local government agency scientists are working with USDA to support improving the quality of drainage waters using drainage water management systems in their respective locations. We are enthusiastic about this initiative and continue to build a coalition of industry, non-governmental organizations and others to support the effort.

Mr. Chairman, we know that the 2002 Farm Bill Conservation Programs are making important contributions to water quality improvements in the Great Lakes. It is more difficult to measure precise impacts. I know that we are making significant progress in this area, and look forward to continuing to improve our work in this area. I thank Members of the Subcommittee again for the opportunity to appear here today, and would be pleased to respond to any questions that Members of the Subcommittee might have.

STATEMENT OF
THOMAS V. SKINNER
GREAT LAKES NATIONAL PROGRAM MANAGER
U.S. ENVIRONMENTAL PROTECTION AGENCY
BEFORE THE
SUBCOMMITTEE ON WATER RESOURCES AND ENVIRONMENT
COMMITTEE ON TRANSPORTATION AND INFRASTRUCTURE
U.S. HOUSE OF REPRESENTATIVES

May 20, 2004

Good morning, Mr. Chairman and Members of the Subcommittee. I am Tom Skinner, EPA's Great Lakes National Program Manager. I welcome the opportunity to discuss with you this morning some of our efforts with regard to the Great Lakes.

The Great Lakes hold 20% of the world's surface freshwater. They are in the middle of one of the world's most productive agricultural areas. Commercial ships from all over the world ply their waters. They are used for recreation, including boating, fishing and swimming. More than one-tenth of the U.S. population and one-quarter of the population of Canada call the Great Lakes Basin home. The Great Lakes touch an incredible number of this nation's citizens.

As a result of all of these factors, the Great Lakes are faced with a myriad of problems, from invasive species to wastewater discharges. Solving each of these problems would be complex even for a single entity, but the Great Lakes border eight states, two countries, and many communities. Local, tribal, state, provincial and federal governments in the U.S. and Canada share responsibility for regulating the Lakes. Numerous non-governmental organizations also play important roles in Great Lakes research and program implementation.

Over the past 25 years, at every level of government, programs have been created to care for the Great Lakes. In the federal government alone there are

approximately 140 programs. As recently as last week, the Great Lakes Governors outlined their priorities in a letter to the House and Senate Appropriations Chairmen and Ranking Members. Some have called for an "orchestra leader" for the Great Lakes, but it is more than that. To use a metaphor: we have lots of musicians, but we need more harmony.

On Tuesday, May 18, 2004, President Bush signed an Executive Order intended to foster that harmony. The President's order has two main elements. First, it creates a means to coordinate federal activities on the Great Lakes by creating a high-level federal task force consisting of the Cabinet secretaries of the appropriate federal agencies and appointing the Administrator of the Environmental Protection Agency to lead it. The Great Lakes National Program Office of EPA will provide staff support for this group.

Second, the order initiates the creation of a "regional collaboration of national significance" to bring hundreds of regional, state, local, tribal and other interests together for the purpose of jointly providing strategic direction for Great Lakes restoration and protection.

Successful regional collaborations of national significance should not be dominated by the federal government. The federal government's role is that of convener and full participant. The Federal government supports local and regional efforts to address the issues facing the Great Lakes and encourages community stewardship.

With respect to the harmonization of federal efforts on the Great Lakes, yesterday EPA Administrator Leavitt convened at the White House the first meeting of the Task Force. At that meeting, the Task Force created the Great Lakes Regional

Working Group called for in the President's order, which I will chair in my role as the EPA's Great Lakes National Program Manager.

With respect to the regional collaboration, on Tuesday in Chicago Governor Leavitt joined Governor Bob Taft of Ohio, in his capacity as Chairman of the Great Lakes Governors, and Mayor Richard M. Daley, in his capacity as Chairman of the Great Lakes Cities Initiative, to discuss the organization of a broad-based regional collaboration. It is only through the transparent consideration of the rich diversity of perspectives surrounding this international treasure that we can truly accelerate remediation, restoration, protection and conservation.

Because this effort is a collaborative one, the answer to many of the natural questions regarding this effort will have to grow out of discussions between the participants. The Governor, Mayor and the Administrator will create a small work group to organize a regional, collaborative effort. We will work with key members of Congress, leaders of regional organizations, tribes, NGOs, and heads of federal agencies, as well as representatives of the Canadian government.

This regional collaboration of national significance will lead to results-oriented strategies for making meaningful progress. The President has asked for a formal report by May 31, 2005.

The Executive Order issued by President Bush, along with the follow-on activities, provide clear evidence of the President's commitment to the Great Lakes. The Executive Order also reflects our commitment to the U.S.-Canada Great Lakes Water Quality Agreement (GLWQA, or the Agreement), as well as to the role and responsibilities set forth for the Great Lakes National Program Office under Section 118 of the Clean Water Act. The Act requires EPA, and more specifically the Great Lakes National Program Office, to serve as the lead entity for coordinating the protection and

restoration of the Great Lakes system with the appropriate federal and provincial agencies in Canada, and also to take a leadership role in coordinating Great Lakes issues nationally with other Federal Agencies, the eight Great Lakes States, and Tribal authorities

The April 2003 GAO Report recommended that the Administrator of EPA ensure GLNPO fulfills its responsibilities for coordinating programs within the Great Lakes basin, and consults with the Governors of each Great Lakes State, as well as with other federal agencies, and other organizations. The GAO also recommended EPA take the lead to develop an overarching strategy that clearly defines roles and responsibilities for coordinating and prioritizing funding for projects.

These recommendations are answered by the Executive Order. It is our intent to incorporate the Executive Order into our response to the GAO report. We expect to finalize our response shortly, and will transmit it to GAO as soon as possible.

Before closing today, I also would like to note President Bush's and EPA's commitment to two programs critical to the success of Great Lakes restoration efforts. A major factor in cleaning up the Great Lakes Areas of Concern is the implementation of the Great Lakes Legacy Act of 2002. I am pleased to report that the Agency has received 14 applications for project funding in response to EPA's March 31 deadline for project proposals for the FY04 Legacy Act appropriation of $10 million. We are in the process of reviewing these applications and expect to initiate at least one project this fiscal year. President Bush has requested an additional $45 million in funding for the Legacy Act in his proposed FY 05 budget, and the interest in Legacy Act projects positions us well to continue cleaning up sites at an increased pace if the President's requested amount is appropriated.

The second program is that of Lakewide Management Plans. LaMPs have been updated every two years, beginning in 2000. Challenges facing each Lake are identified, and these range from continuing to reduce toxic inputs to the lakes, the threat of invasive species, habitat protection and restoration, as well as documenting problems that remain. These are blueprints to manage our efforts to improve the conditions of each of the Lakes, which need specifically tailored actions directed at solving each Lake's most significant environmental problems.

Each LaMP is reflective of current knowledge and the ecosystem status of each lake, using adaptive management approaches and principles. Environmental problems outlined in the LaMPs require multi-year, multi-Agency solutions. Each LaMP includes progress which has taken place over the past 2 years in achieving the goals and objectives outlined in the preceding LaMP.

In President Bush's FY05 budget, an additional $3 million for Lakewide Management Plans and Remedial Action Plans is proposed, which would bring the total up to $5.7 million for these programs. This will help initiate projects to restore beneficial uses at the Areas of Concern and will support State and local governments in their development and implementation of these Great Lakes restoration plans.

In closing, I would like to thank the Committee again for providing the opportunity to report on the considerable progress we are making. Real momentum has been generated to ensure the protection and restoration of the Great Lakes, which is critical for the economic and environmental health of this great nation.

* * *

TESTIMONY OF ROBYN THORSON, REGIONAL DIRECTOR, U.S. FISH AND WILDLIFE SERVICE, DEPARTMENT OF THE INTERIOR, BEFORE THE HOUSE COMMITTEE ON TRANSPORTATION AND INFRASTRUCTURE SUBCOMMITTEE ON WATER RESOURCES AND ENVIRONMENT REGARDING GREAT LAKES WATER QUALITY IMPROVEMENT AND ECOSYSTEM RESTORATION

May 20, 2004

Mr. Chairman and Members of the Subcommittee, I am Robyn Thorson, Regional Director of the U.S. Fish and Wildlife Service's (Service) Midwest Region. I am pleased to appear before you today to discuss the role of the Service in Great Lakes water quality improvement and ecosystem restoration. My statement will address this agency's continuing work on environmental restoration, shoreline protection, and wetland restoration and protection in the Great Lakes basin for the benefit of fish, wildlife, and the people of this country.

The Service is the primary federal agency responsible for conserving, protecting and enhancing fish, wildlife and plants and their habitats. Through its programs and partnerships with others, the Service supports continued efforts toward water quality improvement and ecosystem restoration in the Great Lakes and surrounding waters.

Before I address issues specific to the Service, Let me take a moment and highlight specific action affecting Great Lakes restoration efforts taken by the Administration just this week. Continuing to build on the Administration's successful use of collaboration and coordination to achieve environmental success, President Bush signed an Executive Order (EO) on Tuesday of this week creating the Great Lakes Interagency Task Force which, under the lead of the Environmental Protection Agency (EPA), brings together ten agencies – including the Service –along with states, local governments, and Indian tribes from the region, to provide strategic direction on Great Lakes policy, priorities, and programs. The Service looks forward to participating in this important process.

My testimony today focuses on the Service's important role in improving Great Lakes water quality. Let me begin by citing some examples of what we are doing.

The Service is a leader in reducing contaminants in the Great Lakes, and protecting and restoring watershed quality, through our Natural Resource Damage Assessment and Restoration (NRDAR) Program. For example, at Saginaw River and Bay in Michigan, we led the multi-party Trustee Council that removed more than 340,000 cubic yards of contaminated sediment from the river before it reached the Great Lakes. We also restored nearly 400 acres of coastal wetland and lakeplain prairie, and protected more than 1,600 acres of habitat from development that might have harmed water quality.

Likewise, the Service has promoted NRDAR settlements which are leading to even *more* extensive remediation and restoration efforts in both the Fox River/Green Bay watershed and Grand Calumet Harbor watersheds of the Great Lakes. In implementing these projects, the Service works with diverse partners including other federal agencies, states, tribes, public interest groups, corporations, and private landowners to achieve restoration goals.

I would like to take this opportunity to recognize the U.S. Geological Survey (USGS) as an effective partner in water quality and ecosystem restoration activities, in the Great Lakes and around the Midwest. The Service has been working closely with the Biological Resources Division of USGS, as well as the EPA, on both regional and national levels to develop water quality criteria that protect the most sensitive species, including those that are listed as threatened or endangered. The Service continues to provide data and advice to the EPA on effective implementation of its Great Lakes Water Quality Initiative.

The Service monitors the health of the Great Lakes ecosystem and participates in development of indicators that allow agencies and partners to prioritize and coordinate their efforts for greatest efficiency. We are a participant in the "State of the Lakes Ecosystem Conferences" (SOLEC) that are held every two years in response to the bi-national Great Lakes Water Quality Agreement. We have an active role in the continuing SOLEC by helping to develop indicators that represent the state of major ecosystem components across the Great Lakes basin. Some of the indicators that we are working with include bio-indicators of health for lake trout, coaster brook trout, and scud; contaminants in colonial nesting waterbirds; contaminants affecting productivity of bald eagles; assessing the status of Great Lakes islands; and lake sturgeon restoration.

As identified in the Aquatic Nuisance Prevention and Control Act of 1990 (P.L. 101-646) and by the White House (Executive Order 13112, Invasive Species, February 1999), aquatic invasive species are seen as a growing national problem requiring federal action. In this context, the bi-national sea lamprey control program represents an effective, comprehensive strategy contributing to restoration goals for the Great Lakes. It is administered through the Great Lakes Fishery Commission and implemented by the Service, USGS, Canada's Department of Fisheries and Oceans, and many other partners. In operation since 1955, this program is delivering effective control of one of the most damaging invasive species in North America.

The Great Lakes Fish and Wildlife Restoration Act, initially authorized by Congress in 1990, has enabled the Service to facilitate partnerships with a wide range of federal, tribal, state, and local governments and private entities, as well as with Canada, to create a basin-wide program to assess the ecological status of the Great Lakes. Projects supported by the Service under the Act include the design of geographic information systems describing the state of fish and wildlife habitats in the Lake Huron and Lake Erie basins, and studies of issues such as the occurrence of Botulism type E in Lake Erie.

Finally, the Service assists private landowners, townships, county governments, tribes, and others with projects that benefit water quality as well as fish and wildlife resources. Through our Partners for Fish and Wildlife Program, the Coastal Program and Fish

Passage Program, the Service provides technical and funding assistance for locally led projects. For example, the Partners for Fish and Wildlife Program is a voluntary program that works with private landowners, tribal interests, organizations, local communities, and corporations to restore, enhance and protect habitats on their properties for birds, fish, and plants. Since its inception in 2000, the Great Lakes Coastal Program has restored and protected nearly 2,000 acres of coastal habitat in the Great Lakes.

In addition, the Service manages ten National Wildlife Refuges located along the shores of the Great Lakes for the benefit of fish and wildlife resources. Through our management of these lands we work with adjacent landowners, local governments, and other partners to conserve and restore fish and wildlife and their habitats.
These programs implement Great Lakes priorities that have positive, local impacts on water quality and fish and wildlife habitat. The benefits of our wetland conservation and stream habitat restoration projects include reduction of sediment transport within the Great Lakes basin, improvement in water quality, flood control, and Great Lakes shoreline protection. More than half of all U.S. adults hunt, fish, bird watch or photograph wildlife. The Great Lakes states gain economic benefits from these recreational activities. For example, in our 8 Great Lakes basin states, there are over 10 million anglers who spend over 6 billion dollars a year and over 4 million hunters who spend almost 5 billion dollars a year.

In closing, Mr. Chairman, the Service, through its programs and partnerships with others, supports continued efforts in water quality improvement and ecosystem restoration in the Great Lakes and surrounding waters. We are often called upon to support protection of ecologically important coastal areas and wetland restoration, and elimination or modification of barriers to allow passage of fish in Great Lakes waterways.
We are committed to working with its many partners to ensure healthy fish and wildlife resources in the Great Lakes and to enhance and restore the health of this ecosystem. The system faces many threats – from invasive species to contaminants to loss of coastal habitats. The Service stands ready to continue its leadership role in fish and wildlife restoration and to expand its work with partners to make the world's largest freshwater ecosystem a balanced and healthy environment.

This concludes my testimony. I appreciate the opportunity to appear before the Subcommittee, and I would be pleased to answer any questions you have.

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May 14, 2004

The Honorable Ted Stevens
Chairman
U.S. Senate Committee on Appropriations
The Capitol, S-128
Washington, D.C. 20510

The Honorable C.W. Bill Young
Chairman
U.S. House Committee on Appropriations
The Capitol, H-218
Washington, D.C. 20515

The Honorable Robert C. Byrd
Ranking Member
U.S. Senate Committee on Appropriations
The Capitol, S-125A
Washington, D.C. 20510

The Honorable David R. Obey
Ranking Member
U.S. House Committee on Appropriations
1016 Longworth House Office Building
Washington, D.C. 20515

On October 1, 2003, we the Great Lakes Governors outlined nine Great Lakes restoration and protection priorities to guide Great Lakes restoration and protection efforts. To meet these priorities, we believe that it is important for the U.S. Congress to provide immediate support for important activities in addition to large scale, long-term funding. We continue to work with the region's Mayors toward this end.

As the Governors of our nation's Great Lakes States, we continue to support large scale, long-term funding programs to be implemented by the States. These programs will be essential to the restoration and protection of the Great Lakes. In addition to our continued support for the important principle of large scale, State-implemented restoration and protection funding, we urge the following appropriations in fiscal year 2005 to advance each of the priorities for Great Lakes restoration and protection that were outlined in our October 1 letter.

- **Ensure the sustainable use of our water resources while confirming that the States retain authority over water use and diversions of Great Lakes waters.**

  To successfully implement the Great Lakes Charter Annex of 2001, the collection and application of scientific information regarding surface and ground water must be improved in the Great Lakes Basin.

  We ask that an initial $5 million be authorized and appropriated for this work by the U.S. Geological Survey, National Oceanic and Atmospheric Administration, and the U.S. Army Corps of Engineers. Producing three-dimensional geologic models of glacial materials by the Central Great Lakes Geologic Mapping Coalition is included in this request.

- **Promote programs to protect human health against adverse effects of pollution in the Great Lakes ecosystem.**

  Combined sewer overflows are a major source of pollution concentrated mostly in the older cities of the Great Lakes Region and the northeastern U.S. The Wet Weather Water Quality Act of 2000 authorized $1.4 billion nationally to begin to address this issue.

We ask that appropriations be prioritized to address combined sewer overflows in the Great Lakes region.

- **Control pollution from diffuse sources into water, land and air.**
  Clean Water Act Section 319 program funding provides grants for nonpoint source controls. In fiscal year 2004, nationwide funding resulted in approximately $60 million for the Great Lakes States. Continued funding is essential.

  We would ask that $60 million again be authorized and appropriated for the Great Lakes States.

- **Continue to reduce the introduction of persistent bioaccumulative toxics (PBT) into the Great Lakes ecosystem.**
  The Bi-national Toxics Reduction Strategy has as its goal the minimization of continued PBT introductions.

  Toward this end, we ask that funds be appropriated for a pollutant minimization incentive program for industries and municipalities in the amount of $1.6 million for the region.

- **Stop the introduction and spread of non-native aquatic invasive species.**
  The National Aquatic Invasive Species Act (NAISA) provides a tremendous opportunity to increase the national focus on prevention and control of harmful species that affect the environment and economy of our country. In the Great Lakes region, we have been stricken by sea lampreys, zebra mussels, round gobies and many other invading species. The impacts are real, affecting a major share of our nation's industrial and agricultural output and threatening the well-being of 25 million Americans who depend directly on the Great Lakes for water, recreation and food. Six of the Great Lakes states have developed and are currently implementing state management plans to control the economic and ecological impacts of invasive species.

  We therefore ask that you reauthorize the NAISA by passing HR 1080 and S525 as well as appropriating funds to implement this Act. We also ask that an additional $4.2 million be authorized and appropriated for sea lamprey controls in the Great Lakes and that the current U.S Fish and Wildlife Service's appropriation for implementation of state management plans be increased by $1.8 million. Finally, we ask that you support the request of the House and Senate Great Lakes Task Forces for $8 million to make permanent the existing barrier in the Chicago Sanitary & Ship Canal, to construct a second barrier, and to operate and maintain both barriers at full federal cost to prevent the spread of the Asian carp and other non-native species.

- **Enhance fish and wildlife by restoring and protecting habitats and coastal wetlands.**
  It is crucial to protect sensitive coastal habitats, which are irreplaceable once lost. To that end, $30 million was appropriated in 2001 as part of the

Great Lakes Coastal Restoration Program. That funding attracted an additional $42 million in State and local matches that was spent largely on habitat protection and restoration.

In addition, the U.S. Fish and Wildlife Service's Upper and Lower Great Lakes field stations provide critical research, monitoring and restoration of Lake Trout and endangered species like the Lake Sturgeon and Piping Plover. The hatcheries are the primary source of Lake Trout eggs and fingerlings stocked in the Great Lakes each year to maintain what has become a world class sportfishery, creating significant economic benefits for small businesses and communities throughout the Great Lakes Basin. It is also imperative that federal and State agencies coordinate marking of hatchery fish in the Great Lakes Basin to evaluate restoration efforts and sustainability of the fishery. We ask that $5.6 million be appropriated to maintain this valuable asset.

We therefore ask that funding for these programs be reauthorized at a minimum level of $35.6 million and that funding be appropriated in the same amount.

- **Restore to environmental health the Areas of Concern (AOC) identified by the International Joint Commission as needing remediation.**
  The Great Lakes Water Quality Agreement directs Canada and the United States, working with State and provincial governments, to develop plans (known as Remedial Action Plans) to restore and protect ecosystem health so that the water is drinkable, beaches are swimmable and fish are safe to eat, among other such beneficial uses. The two nations also agreed that the worst areas, designated as "Areas of Concern" would be given priority attention.

  We ask Congress to appropriate previously authorized funds in the amount of $5.7 million to distribute to the Great Lakes States via program grants for Remedial Action Programs (RAPs) and Lakewide Management Plans (LaMPs); $15.4 million for other AOC related activities; as well as $45 million for Legacy Act implementation.

  We therefore request that funds in the amount of $66.1 million be appropriated to address Areas of Concern throughout the Great Lakes.

- **Standardize and enhance the methods by which information is collected, recorded and shared within the region.**
  It is essential that indicators of water quality and related environmental factors in the Great Lakes be developed and a network created to monitor those indicators regularly throughout the Great Lakes Basin.

  We therefore ask that funds in the amount of $7 million be authorized in support of these efforts. We further ask that this amount be appropriated to ensure that the best scientific information can be provided to those who manage the waters of the Great Lakes.

- **Adopt sustainable use practices that can protect environmental resources and that may enhance the commercial and recreational value of our Great Lakes.**

  In spite of extensive efforts in all the Great Lakes States and municipalities to improve sewage treatment, beach closings remain a vexing problem. Monitoring and early detection is essential to ensure that our citizens' health is adequately protected. The Beach Act authorizes critical funds to allow the Great Lakes States to improve beach-monitoring and posting programs.

  We therefore ask that Congress appropriate $2 million already authorized under the Beach Act. In addition, we urge you to allow State grant administration costs to be allowable in determining match requirements.

We welcome the opportunity to join you in protecting and restoring the Great Lakes by taking these substantive steps this year. We believe progress toward our shared goals for the Great Lakes is essential to the public health and economic vitality of our nation. We continue to engage the public in our dialogue and look forward to building on the partnership among our region's Governors, Mayors and Members of Congress.

Rod Blagojevich
Governor of Illinois

Joseph E. Kernan
Governor of Indiana

Jennifer M. Granholm
Governor of Michigan

Tim Pawlenty
Governor of Minnesota

George E. Pataki
Governor of New York

Bob Taft
Governor of Ohio

Edward Rendell
Governor of Pennsylvania

Jim Doyle
Governor of Wisconsin

cc: Great Lakes U.S. Congressional Delegation

GREAT LAKES WATER QUALITY AND RESTORATION EFFORTS

Friday, May 21, 2004

HOUSE OF REPRESENTATIVES, SUBCOMMITTEE ON WATER RESOURCES AND ENVIRONMENT,COMMITTEE ON TRANSPORTATION AND INFRASTRUCTURE, WASHINGTON, D.C.

The subcommittee met, pursuant to call, at 10:00 a.m., in room 2167, Rayburn House Office Building, Hon. John J. Duncan, Jr. [chairman of the subcommittee] Presiding.

Mr. DUNCAN. We are going to go ahead and call this hearing of the Water Resources and Environment Subcommittee to order. We had a lengthy hearing yesterday, and both myself and Congressman Costello gave detailed statements. we had quite a few members and had a very interesting and informative hearing with witnesses from five Federal agencies. We are also going to have a congressional roundtable meeting with Mayor Daley in Chicago and others who might be interested I think on Monday, June 7th.

Since we finished our votes and many, many members left last night, we usually have quite a few members here, but I don't think we will have very many here today. But we are honored to have at least the two that I think are probably the most interested in this, and that is our friends Congressman Mark Kirk from Illinois and Congressman Rahm Emanuel from Illinois. As I mentioned yesterday the importance of the Great Lakes is not only to the eight Great Lakes States, but to the Nation as a whole.

The Great Lakes contain one-fifth of freshwater in the entire world and 95 percent of freshwater in the United States. They are very important economically, and, they are very important environmentally.

When we have a members panel in this subcommittee and also when I chaired the Aviation Subcommittee, we have an opportunity to ask members questions and discuss things with them on the floor, and in consideration of their busy schedules we will just have the members give their statements and then they can go ahead and leave and we will then get to the remaining witnesses that we have on the very distinguished panel that follows these members.

And, Mark, you are listed first, so we always proceed in the order the witnesses are listed—excuse me. I got ahead of myself. I am sorry.

Mr. COSTELLO. The chairman and I have talked, and we are attempting to expedite this hearing so that we have people who I know need to catch airplanes. But let me just briefly say that I appreciate not only this hearing but the series of hearings that we are holding on the Great Lakes. Yesterday we heard from representatives from Federal agencies; today we are hearing from Members and other witnesses.

You know, the membership knows, that yesterday there was I think frustration expressed on the part of members of this subcommittee on the fact that we have had a number of studies over the last 25 years. But the fact is, is what we need is an action plan

and a commitment on the part of the administration and this Congress to fund the restoration of the Great Lakes. We appreciate the fact and welcome the President's announcement earlier in the week, the collaboration and coordination among the Federal agencies and all of the other agencies involved in the Great Lakes. But, frankly, we need collaboration; but we do not need another study. We need an action plan and we need a commitment to fund that action plan.

So, Mr. Chairman, I appreciate your calling this hearing today, and look forward to hearing from our witnesses.

Mr. DUNCAN. Well, thank you very much, Mr. Costello. And as you noted, there were several members that expressed concern about that. And I told the agencies that what we would do, all of the agencies not only committed on the record that this Executive Order would not just turn into another study, that action would be taken. And we told them that we would call a hearing 1 year from now, exactly 1 year from now and ask them specifically to come in and tell us in detail what actions they have taken so that we try to do everything possible to make sure that not just a bunch of paper has been traded but that actual productive steps have been taken.

So with that, Mark, you can go ahead and begin your testimony.

TESTIMONY OF THE HON. MARK STEVEN KIRK, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF ILLINOIS

Mr. KIRK. Thank you, Mr. Chairman. I have a prepared statement which I would like to submit for the record.

Mr. DUNCAN. Your full statements will be placed in the record, and then you can go ahead and make any comments you wish.

Mr. KIRK. Thank you, Mr. Chairman. It is obvious to everyone working on this issue, but not to the wider public, we are talking about an ecosystem with 20 percent of the world's freshwater, a watershed for 38 million people, 25 percent of both U.S. and Canadian populations. We support a fishing and boating industry in the Great Lakes of $4 billion. And when we contaminate the lakes, it takes over 100 years to flush the lakes out.

We have over 140 different Federal programs addressing the Great Lakes, and I think there is a need for greater coordination. To quote George Bush, Sr., we need a vision thing for the Great Lakes, and I think that is where the Congress and the Executive Branch are lurching towards.

I see three major threats to the Great Lakes in this order of priority:

Number one is we have a growing mercury level in the Great Lakes. Because of the Clean Water Act and its enforcement, the days of industries in Gary, Indiana belching pollution into Lake Michigan, for example, are largely over, and point source pollution is no longer the major factor in the health of the lakes; it is air pollution settling on the lakes. And the air pollution is also—the composition of that air pollution is changing. It used to be that we had municipal incinerators pumping mercury into the air at the highest rate. But with implementation of the Clean Air Act, they now have to have comprehensive control technology, and a munici-

pal incinerator, for example, in Northbrook, Illinois, will have to remove 90 percent of the mercury before it leaves the stack.

One industry is uncontrolled, and that is coal-burning power plants. There is I think an ignorance and fear of the new technology in the coal burning industry. A scrubber will cost $100 million per plant, and so they are very afraid of any additional technology. But the technology to remove mercury—and I hate to get technical here, but it is just the injection of carbon absorbents into the smokestack flume to absorb the mercury would cost under $5 million per plant and would remove 90 percent of the mercury. A new Wisconsin power plant in Kenosha already does this, and my hope is that we do that in the future. That is for another committee and another debate. But that is key threat number one to the Great Lakes.

Key threat number two is alien species. And anyone who lives on the Lake Michigan shoreline, Congressman Emanuel's and my district both border Lake Michigan, went through the 1960's and the massive alewife die-offs, hundreds of millions of fish, all alien to Lake Michigan, all dying at once, fouling our beaches. For me, summertime was a fairly smelly experience at the beach with this alien species completely unbalancing the ecosystem of the Great Lakes.

We have a number of other alien species that have been injected into the lakes. For example, one of the most recent, the fishhook flea was injected into Lake Ontario by a Baltic freighter. This is a Caspian flea with a one centimeter spine that gets caught in fishes' mouths, et cetera. It took about a year and a half for the bloom of that flea to appear off the coast of Waukegan, but it is there now. Really, through incompetent management of the St. Lawrence Seaway and the lack of aggressive enforcement in flushing ballast waters, we have been continually disrupting this ecosystem.

And the biggest threat that we face is the Asian carp, which is now working its way through Illinois waterways trying to reach Lake Michigan. For Congressman Costello, he knows this well because this species is already a very aggressive and eco-changing species in the Mississippi watershed. It is only about 10 miles from the Lake Michigan watershed now, stopped by one underfunded Army Corps of Engineer barrier that happens to be located in Congresswoman's Judy Biggert's district. If we lose that battle, I predict that we will have an ecosystem change as radical as the massive alewife die-offs that we had in Lake Michigan, and we can't let that happen.

Finally, we have a number of contaminated sediments, 31 polluted harbors around Lake Michigan, including in my district, Waukegan Harbor, one of the most polluted toxic hotspots. We are losing the battle against Canada for cleaning up our sites. The mayor of Collingwood, Canada has been the first Canadian harbor to delist as a polluted harbor and clean up his sediments. I would like us to have aggressive action on cleaning up these harbors. A Northeast-Midwest Coalition study showed that the cleanup of Waukegan Harbor, which cost roughly $21 million, will ignite an $800 million investment boom in that city because it will then put 1,600 acres of shoreline property on the market. And God is not

making any more Lake Michigan property. And to have this remediated would completely turn around a city that I represent and its economic future.

We have some good news. This committee through its leadership passed and enacted the Great Lakes Legacy Act to address contaminated sediments. Congressman Emanuel and I buttonholed the President, I don't think he had anywhere to go as we cornered him on one side of Air Force One and educated him on the Great Lakes Act and its potential, and it had a real impact. We went from $15 million in the budget to $45 million in the most recent budget request. That will be a visible and meaningful difference for harbors like Waukegan.

But we need to go further. We need to go a lot further, which is why I applaud Congressman Emanuel and his legislation that provides the vision thing, and I will let him go into the legislation more. I will just talk about one bell and whistle that I added to this legislation, which makes me very enthusiastic for it.

When you clean up a harbor, you need to deal with a number of bureaucracies. Our environmental law was written over time, like a sediment, and each bill was not written in coordination with another bill. So what happens is each bureaucracy empowered by its enabling legislation is given the authority to say no on a cleanup plan. But there is no overarching vision to force a yes.

Our bill says that the Federal Government can appoint a special master who must meet every State and Federal cleanup standard, but on a 1-year notice can say: If you don't get your act together, all you various Federal and State bureaucracies, I will order the cleanup plan. Because what has happened in my harbor and many others is there is always somebody that says no. And the result is no cleanup, which is the worst of all outcomes.

I wish we had moved much faster on Congressman Emanuel's and my bill.

With regard to the Executive Order, I would simply say I don't want to kick a former Texas Governor who is beginning to get the Great Lakes in the mouth. He has taken action on the Legacy Act, and that is a good thing. He has now put forward an Executive Order showing that he understands there is a problem and would address it. When I see the latest Fox poll, I don't know who is going to be President next year; and so I would urge that this Executive Order and its group be very bipartisan so no matter who reports next year, the results of that report are respected. And as we know, this Congress is slowly going to shut down and do only regular appropriations bills in its final months. And so my hope is that we come out next spring, we sign up everybody we possibly can on this bill, we give it a good boost in the Executive Order Task Force, and then this committee, with strong bipartisan support, has very aggressive action to provide that vision and leadership that we need.

Thank you very much, Mr. Chairman.

Mr. DUNCAN. Thank you very much, Mr. Kirk. A very fine statement. And as I said, and as Congressman Costello noted, we heard from all the key agencies yesterday, and the EPA through Mr. Skinner, with whom I am sure you are familiar, agreed to be the lead agency, and they have accepted the responsibility to make

sure that some good things, many good things are done. And then the Army Corps told us that under the Great Lakes Legacy Act that they have already removed 90 million cubic yards of contaminated sediment. So that is a pretty good progress in a short amount of time. That bill, as you said, came through this subcommittee and was signed into law just in 2002, and so they are moving on that and will be doing even more now. And also, Mr. Costello got into the Asian carp situation. So we have covered some of these things. But you have given a very fine statement.

Mr. KIRK. Mr. Chairman, just to say that Tom Skinner is not only leading on this, but he is the mayor of Lake Bluff, Illinois, a shoreline community, and, boy, does he get it on the Great Lakes. So I am glad that Governor Leavitt has someone who not only understands EPA Region 5 and our concerns, but represents Lake Michigan shoreline constituents in his part-time unpaid job.

Mr. DUNCAN. Well, he impressed me as being a very intelligent and competent person, and he gave a good statement and a good response to the many questions that we and various members had.

Rahm.

TESTIMONY OF THE HON. RAHM EMANUEL, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF ILLINOIS

Mr. EMANUEL. Mr. Chairman, thank you, and I would obviously request unanimous consent to have my full statement be put in the record.

Mr. DUNCAN. It will be put in the record.

Mr. EMANUEL. You know, given both yesterday's testimony and what we are saying today and obviously the panel after us, I am kind of reminded what Mo Udall once said: Everything that needs to be said has been said; it just hasn't been said by everybody that needs to say it. So this is my one shot to say it.

And first of all, I want to thank you for this hearing and the hearing you plan also in the Chicago area. I want to thank you for your commitment. And like Mark, when we were growing up in Chicago in the 1960's, and in the summer, that smell, you used to have to run past all the dead fish, hop in the water underneath, swim 50 feet hoping you got past them all. It did expand your lungs a great deal and you became a better swimmer for it, but that is what our youth was like.

And the truth is, on the 31-year anniversary of the Clean Water Act, we can say with confidence that the Clean Water Act was a success. Lake Michigan today is a far better lake than it was when we were growing up. But if you don't build on that progress you are going to start to slip backwards. And that is I think—as Lake Erie has, the dead zone has come back now and is growing each year because it is the most shallow of the lakes. As we have the Asian carp, et cetera, and the highest amount of beach closings ever recorded, you can see that progress was made but we have constant challenges.

And just the other day, to give a sense of it, on Wednesday, Milwaukee dumped 1.5 billion gallons of untreated sewage into the lake. And we now have I think a little over 100 different invasive species. And you mentioned Asian carp. We have zebra mussels. And the truth is we would never treat Yellowstone Park or the

Grand Canyon like Milwaukee just did. And that is not to pick on Milwaukee. When it rains in Chicago, we open up the locks and it goes forward.

So in my view and everybody I think universally shares this in the sense of 33 million Americans get their daily drinking water from the Great Lakes. It is the largest body of freshwater in North America. It represents a quarter of the world's entire freshwater. No natural resource in the sense of Yellowstone Park, Grand Canyon, would ever be treated the way we treat the Great Lakes. And last year to this year, beach closings are up in the Chicago area 62 percent. There were 919 in 2002, and 1,473 in 2003. And what I intended and tried to do with this legislation, which has universal bipartisan support, at these levels, there is about 106 Members of the Congress, 44 Republicans, the rest Democrats, 20 members of this committee alone; there are 15 Senators, the lead of the legislation in the Senate is Senator DeWine from Ohio, all eight Governors and 40 mayors, every mayor with a population of 50,000 and above, have endorsed the legislation. And all it intended to do was put the resources towards the Great Lakes and enact what Director Whitman announced in 2002, of April 2002, which is a coordinating strategy to clean up the Great Lakes and bring some sense to all the different and disparate entities with a strategy. And all this legislation does is literally put the money towards the strategy she enunciated. And that strategy was built on seven preceding studies done just in the last 3 years.

And what we wanted to do, and we didn't ask for a dollar more than what Everglades was getting—not a dollar less, either—was to put $4 million for Lake Michigan. It would obviously be dedicated towards these three areas: Invasive species, urban runoff—in the past it had been industrial, and today it is majority urban—and lastly what we call mercury hotspots or troubled areas, and clean them up. Lake Erie would obviously have its areas, Superior would have its areas. And it would work that the EPA Director, to get the money you have to have a plan that the EPA Director signed off. And every 2 years there is a monitoring of whether you are making progress and meeting the goals of what you said you were going to clean up.

Now, to the issue of the Executive Order, I am glad that the President signed the Executive Order. It is better to have it than not. But that Executive Order, if you look at the language, is exactly what Director Whitman announced 2 years ago. And I somewhat jokingly say, you know, in Iraq we are spending $5 billion on wetlands restoration, on sewage treatment, and on water preservation for them. So in my view is, I will give them the Executive Order if we get the $5 billion and see who gets ahead. And I think what we need are the resources that are dedicated here towards cleaning up the Great Lakes and dealing with what we know today are the troubled spots. And since the time of the Executive Order, the Detroit News and now also the Chicago Tribune: I think what is missing here is the will and the action and the resources to clean up the Great Lakes. And this is merely, I think, the beginning. And also, it would inspire the States, who all have their own pact, to up their resources, and it would actually have a rebound effect. So it wouldn't be just a capped $4 billion.

And so that is the focus of the legislation as well as the purpose of the legislation, which is literally to enact the President's strategy as enunciated in April 2002. Thank you.

Mr. DUNCAN. Well, thank you very much. You mentioned the Milwaukee dumping, and Congressman Costello showed me that yesterday. And I will tell you that it was mentioned in here that the Federal Government had provided a little over $815 million this year to the Great Lakes States—but some of this is up to the cities and the States, too. I mean, the Federal agencies can do their part, but Wisconsin and Milwaukee need to do their part, also.

We have been joined by Mr. Thompson. And I just wonder if he has any comments or questions at this point?

All right. Mr. Costello.

Mr. COSTELLO. Mr. Chairman, just a couple of comments. One is, please take back to our colleague Judy Biggert a commitment yesterday on the part of the Corps of Engineers. They have said that the second barrier concerning the Asian carp should be erected and completed by September. So I think that is good news for her and for all of us.

Number two, on the issue of the 1.5 or 1.6 billion dumped in the Great Lakes by Milwaukee, you know, I think it is worth noting that that was after 3 inches of rain over a 36-hour period. So it is something that caught the attention of this committee.

And, finally, let me just say that I appreciate the leadership that both of you have taken on this issue. I think the chairman said when he opened this hearing up, I don't know of any two other members who have done more or have provided the leadership on this issue. And I look forward to working with both of you and with our other colleagues in the Great Lakes area to perfect this legislation to the point that we can pass it in the House and get it out of the Senate and get it on the President's desk. Thank you.

Mr. DUNCAN. Well, I will second what Congressman Costello said. Under this subcommittee's jurisdiction we are being asked to oversee big, big projects in coastal Louisiana, the Everglades, and all over the country. But as you can see, we are devoting a lot of time and attention also to the Great Lakes, and we are going to help all we can on it. But thank you very much for being here this morning.

We now will go to our main panel of witnesses. And we have a very distinguished panel with us today, and I will ask that they go ahead and take their seats at the table.

The panel that we have with us today representing the International Joint Commission is the Honorable Dennis L. Schornack, who is the U.S. Chairman, and he is from Williamston, Michigan. We have representing the Council of Great Lakes Governors, Mr. Christopher Jones, who is the Director of the Ohio Environmental Protection Agency and Chair of the Great Lakes Governors' Priorities Task Force, and he is from Chicago. We have representing the U.S. General Accounting Office a man who has been with us before, Mr. John B. Stephenson, who is Director of the National Resources and Environment Section. And we have representing the Annis Water Resources Institute, Mr. Alan D. Steinman, who is the Director of that institute from Muskegon, Michigan.

And we always proceed in this subcommittee in the order in which the witnesses are listed on the call of the hearing. So that means, Mr. Schornack, we will proceed with you first. And all full statements will be placed in the record. We, like all subcommittees and committees of the Congress, ask witnesses to limit their statements to 5 minutes. In this subcommittee, we go ahead and fudge a little bit and tell you that you have 6 minutes, but I do cut you off after 6 minutes. And that is just to be polite and in consideration to the other witnesses. You may proceed.

TESTIMONY OF HON. DENNIS L. SCHORNACK, U.S. CHAIRMAN, INTERNATIONAL JOINT COMMISSION, WILLIAMSTON, MICHIGAN; CHRISTOPHER JONES, DIRECTOR, OHIO EPA, COUNCIL OF GREAT LAKES GOVERNORS, CHAIR, GREAT LAKES GOVERNORS' PRIORITIES TASK FORCE, CHICAGO, ILLINOIS; JOHN B. STEPHENSON, DIRECTOR, NATIONAL RESOURCES AND ENVIRONMENT, U.S. GENERAL ACCOUNTING OFFICE; AND DR. ALAN D. STEINMAN, DIRECTOR, ANNIS WATER RESOURCES INSTITUTE, MUSKEGON, MICHIGAN

Mr. SCHORNACK. Well, thank you, Chairman Duncan, and members.

Restore the Greatness is a powerful theme. It is one that even fits on a bumper sticker. But what does it mean? Defining restoration means defining priorities so that we know where to start, where to spend that first dollar. It is just as critical to set goals so that we know when we are done. That is how we can figure out how much it is going to cost. And all along the way we need mileposts that we can measure progress or, to put it more bluntly, to measure the return on our investment.

The Great Lakes Water Quality Agreement establishes what I have termed the three-legged stool that supports the ecosystem health; that is, restoring and maintaining the chemical, physical, and biological integrity of the Great Lakes. All five lakes must be equally strong and equally long, or our approach to maintaining that health becomes unbalanced and we risk toppling the stool.

First, cleaning up areas of concern in the Great Lakes must be a top priority for the investment of public resources. With 41 out of 43 areas of concern yet to be cleaned up, our countdown to clean, only two down in two decades, is painstakingly slow. So the President should be commended for committing $45 million in the 2005 Federal budget, that is four times this year's funding, to remove contaminated sediment in the areas of concern through the Great Lakes Legacy Act that has been mentioned previously.

I urge Congress of course to keep that commitment and to look at expanding it in the future, because the Legacy Act is all about projects and progress, not just planning and process.

Aquatic invasive species are the number one threat to the biological integrity and biodiversity of the Great Lakes. With 181 invaders already identified and nearly two invaders being discovered annually, the Great Lakes may well be on the verge of an invasional meltdown. What is scary, Mr. Chairman, is that the Asian carp mentioned earlier are like an Army ready to invade the lakes, but our only protection, an experimental electrical barrier in Chicago, is starting to disintegrate and fail. Completing the second

barrier is an urgent priority, but the project is $1.8 million short. We cannot let the Great Lakes become a carp pond, and we cannot let a $4.5 billion fishery be devastated because of inaction.

We also can't expect Illinois to shoulder the burden alone. Funding the barrier must be a burden paid by all Great Lakes States in partnership with the Federal Government. That is the bad news.

The good news is that preventing the onslaught of aquatic invasive species is the most solvable problem in the Great Lakes today. For example, to prevent further introductions in ballast water, the worst offender, we should look beyond shipboard treatment to other solutions, including shore-based treatment, and maybe, just maybe even keeping out of the Great Lakes oceangoing ships that pose a risk of releasing biological pollution. Instead, cargo could be transferred to lakers or other modes of transportation if stopping invasions means focusing on how to move cargo, not creatures.

So I commend the U.S. Coast Guard for their work in negotiating a ballast water convention that allows party nations to adopt tougher standards and to adopt them sooner. This achievement allows Congress to put a tough standard in the National Aquatic Invasive Species Act that protects especially vulnerable regions like the Great Lakes. Pass NAISA, set the standard, and the world will follow because they must.

The third leg of the stool, physical integrity, might be our greatest restoration challenge. Hardened shorelines, habitat destruction, and dramatically altered hydrological flows all challenge the sustainability of our shared waters.

The Commission's own Lake Ontario-St. Lawrence River study is informing our response to that challenge. We are looking to manage water levels and flows not just for hydropower and navigation, but also to benefit conservation interests such as fish spawning and concerns of riparians and recreational boaters.

Now, let me bring those three legs of the stool back together in the context of the upcoming review of the Great Lakes Water Quality Agreement. The agreement sets very clear and specific restoration goals for chemical integrity, but in my view it lacks specific goals for achieving biological and physical integrity. Moreover, the agreement has not been updated since the cicadas last emerged 17 years ago. So we might want to start looking at elevating the Great Lakes Water Quality Agreement to treaty status, make it enforceable under law, and giving the United States Senate a stake in its implementation. What is important is that a renewed agreement could provide the blueprint for binational action.

And, finally, a quick comment on what has become a bone of contention when it comes to Great Lakes restoration. And that is, who is in charge. I commend the President for his action earlier this week to put someone in charge; that is, to designate Administrator Leavitt as the conductor of a Great Lakes orchestra that includes State and local players. The Great Lakes Interagency Task Force is an efficient and effective way of coordinating effort, combined with the clout to carry out restoration actions that recognize the binational character of the lakes and the need for Canadian cooperation.

When all the players start playing from the same song sheet and following the same leader, achieving restoration can become a reality. And I thank you for the opportunity to make these comments today.

Mr. DUNCAN. Well, thank you very much, Mr. Schornack. We have held several hearings in this subcommittee on ballast water conditions and invasive species. And you mentioned the Asian carp once again. We have had a lot of publicity here about the snakehead fish, and they actually found one down in Knoxville the other day, in my hometown. But I can assure you, Mr. Costello and I hope we can get this straightened out before the cicadas come again.

All right. Let us see who is next here. All right. Mr. Jones is next.

Mr. JONES. Thank you, Mr. Chairman, and members of the subcommittee, for the opportunity to appear before you today to discuss the significant need for a coordinated and adequately funded restoration program for the Great Lakes. The Great Lakes are an ecological treasure, and I won't repeat what you have already heard and already know.

Recognizing the importance of the Great Lakes to the region's economy and quality of life, the Governors of the eight Great Lakes States formed a nonpartisan partnership, the Council of Great Lakes Governors, to address in a cooperative manner our shared environmental and economic challenges. As the current Chairman of the Council, Ohio Governor Bob Taft has led the Great Lakes Priorities Initiative. Its goal is to protect and restore our region's greatest natural resource through efficient, well-coordinated programs supported by adequate Federal funding.

And I should note that we are seeking this Federal funding as a supplement to State and local investment already taking place. The 2003 report by the GAO documents the fact that State and local spending on Great Lakes programs exceeded the investment by the Federal Government during the study period. While we remain committed to doing our share, we cannot accomplish many urgently needed restoration goals without more Federal participation.

In October, the Great Lakes Governors released a list of nine priorities for Great Lakes protection and restoration. The States are in the process of holding public workshops throughout the region to solicit input on these priorities, and we believe that at the end of this process we will be able to represent to Congress that this is a consensus list of priorities around which restoration funding can be structured.

The Governors have developed a list of short-term funding priorities for consideration by Congress in the current appropriation cycle. The list was presented to the leaders of the appropriations committees within the past few days and copied to members of the region's congressional delegation, and hopefully that letter has now been faxed to the committee. I intended to attach it to my testimony.

In addition, the Council hosted a meeting in Chicago 10 days ago that brought together policymakers from the States and relevant Federal agencies, our Canadian partners, representatives of the re-

gion's mayors, environmental NGOs, and members of the business community. That group reached an unprecedented level of consensus about short-term priorities for the Great Lakes restoration, and agreed on a process for quickly coordinating the many long-term restoration plans already in existence.

The group itself articulated the need for better coordination among Great Lakes stakeholders, and appears ready to work closely together to present a focused vision and plan of action to Congress. And in my testimony I have listed a number of the short-term priorities: Passage of a strong and effective bill to control nuisance aquatic invasive species. Add the Governors to the list. We have a real problem there that needs to be addressed, and we feel that a strong bill such as S. 525 or H.R. 1080, which includes provisions that address the specific challenges faced by the Great Lakes, are the best way to go.

Water infrastructure. Increased funding is necessary. I know that the subcommittee recently heard testimony regarding the need for additional investment in drinking water infrastructure. The need is equally great when it comes to sewers and related infrastructure. As you may recall, U.S. EPA's gap analysis showed a $525 billion shortfall between current levels of spending and the projected need for water infrastructure investment over the next 20 years. Clearly, this need cannot be met without increased participation of the Federal Government.

CSOs, which you discussed in Milwaukee, are only one of the water infrastructure challenges faced by local communities, and increased funding for the State revolving loan funds that finance wastewater projects would be a good step toward meeting our infrastructure needs.

The Legacy Act has been mentioned, and we are very pleased to see the proposal for $45 million for Legacy Act funding. In my testimony, I give a very specific example of improvement as a result of sediment removal.

On Tuesday, President Bush signed an Executive Order directing the U.S. EPA Administrator Mike Leavitt to convene a regional forum on Great Lakes restoration. Governor Taft and Chicago Mayor Richard Daley joined Administrator Leavitt in making this announcement, and they will assist him in calling together a broad-based group that can provide a strong regional voice to advocate for comprehensive restoration of the Great Lakes.

In addition, the President's order seeks to improve coordination among the many Federal agencies with responsibilities on the Great Lakes. Given that the GAO report identified lack of coordination as a primary stumbling block, this is also an important step. The Great Lakes Governors welcome the President's recognition of the importance of the Great Lakes to the Nation as a whole and his willingness to commit his administration to work with them and the Great Lakes community toward a well-coordinated restoration agenda. It is the hope and expectation of the region's Governors that the work of the group Administrator Leavitt will convene will ultimately lead to adequate Federal funding to implement its restoration priorities.

The members of the Governors Council pledge to you that we will put the investment we ask Congress to make in the Great Lakes

to good use. We will restore this global ecological treasure to its highest and best use so that the 40 million people who live in the Great Lakes Basin will be sustained by a healthy ecosystem, so that Americans and travelers worldwide can safely enjoy the recreational benefits of the Great Lakes, so that endangered and threatened species in the Basin can thrive, so that American businesses can continue to use the lakes as a shipping portal to the world. These are diverse uses, but this incredible resource can support all of them and more.

Thank you, Mr. Chairman.

Mr. DUNCAN. Well, thank you, Mr. Jones. You mentioned H.R. 1080. We are working with Congressman Gilchrest of Maryland, Congressman Ehlers of Michigan, both of them sit on this subcommittee, in coming up with some type of invasive species legislation. Some of the issues that their legislation touches on are under the Resources Committee, but the primary jurisdiction for the problems of that nature does come under this subcommittee, and we are going to work on that in the months ahead.

Mr. Stephenson.

Mr. STEPHENSON. Thank you, Mr. Chairman, Congressman Costello.

I am here today to discuss GAO's work on environmental restoration activities in the Great Lakes Basin. My testimony is based on our last year's report to the House and Senate Great Lakes Task Force in which we attempted to identify totality Federal and State funding for Great Lakes restoration. We looked at overall planning and coordination of restoration efforts and tried to assess restoration progress since the original Great Lakes Water Quality Agreement that was signed by the U.S. and Canada in 1972.

It is fair to say that progress has been made in several areas, such as controlling the harmful sea lamprey, reducing phosphorus, and improving some fish populations. But the Lakes are still threatened and actually getting worse on many environmental fronts. It has been over 3 decades since the original agreement was signed, yet raw sewage, as you heard earlier, is still being dumped into the lakes, many fish are still unsafe to eat, beach closings have increased, and the reemergence of the Lake Erie dead zone is not a good thing.

Only two of the 43 areas of concern targeted for cleanup in a 1987 amendment to the agreement have been restored, and they belong to Canada. So in the 17 years since the amendment none of the 26 areas solely in U.S. waters or the five shared with Canada has been completed. So what is the problem?

With some difficulty, we were able to identify 181 Federal and 68 State programs operating in the Basin. These programs span 10 agencies and all eight Great Lakes States. While Great Lakes specific funding for some of the nationwide and statewide programs is not tracked, we estimated that about 3.9 billion, 2.5 Federal and 1.4 State, was going toward Great Lakes restoration for the 10-year period ending in fiscal 2001. In contrast, about 5.3 billion, or 1.4 billion more, was devoted to the South Florida ecosystem restoration during roughly the same 10-year time period. The considerable difficulty we had in simply identifying programs and dollars for the Great Lakes versus South Florida is indicative of the problem.

While there are numerous programs and considerable resources being devoted to the Great Lakes Basin, it is difficult to determine what we are getting for the money. There is no shortage of strategies at the binational, Federal, regional, State, and local levels to address specific environmental problems, but there is no overarching action plan for coordinating these disparate strategies and program activities into a single coherent approach for restoring the Basin. Without such a plan, it is difficult to ensure that limited funds are used effectively.

Other large-scale ecosystem restoration efforts such as South Florida and the Chesapeake Bay have demonstrated the benefits of such a plan. Exacerbating the problem is the lack of an effective authoritative organizational entity to implement the plan, establish funding priorities, and monitor progress against the plan. To paraphrase Senator Voinovich, we lack an orchestra leader.

There is also a lack of a comprehensive, widely-accepted set of indicators and a comprehensive scientifically based monitoring system for determining whether the overall state of the Basin is getting better or getting worse. The call for such a monitoring system can be traced back to the original agreement, but despite several attempts to develop such a system this requirement remains largely unmet. In our report, we recommended that EPA, one, work with the other Federal agencies, States, and localities to develop this overarching plan that clearly defines who is responsible for coordinating and prioritizing projects and funding.

Two, develop indicators and a monitoring system for evaluating the merits of alternative restoration projects and measuring overall restoration progress. And, three, submit to the Congress a time phase proposal for implementing and funding this strategy.

EPA agreed with our conclusions, and our report came out over a year ago, but they have not yet formally responded to the report. Furthermore, EPA has not met its Congressional reporting requirement under the Great Lakes Legacy Act.

Mr. Chairman, that concludes my statement. I will be happy to answer questions.

Mr. DUNCAN. Well, you mentioned that it is difficult to determine what we are getting for our money, and that point was raised several times in here yesterday. And I know that in your April 2003 report that you held up there, you identified about 2.2 billion in Federal assistance for activities that went to support the Great Lakes between 1992 and 2001. But that didn't include any of the funding through the Clean Water SRF funding or the USDA conservation programs. And just one of those USDA conservation programs, the witness from the Department of Agriculture yesterday said that the program had gone from 175 million to 925 million just from 2002 to now. So we are doing quite a bit.

Next, we will now hear from Dr. Steinman.

Mr. STEINMAN. Good morning. Thank you for the invitation, Mr. Chairman, to appear before your subcommittee and testify about restoration activities in the Great Lakes.

I have been involved in large-scale ecosystem restoration efforts for the past 20 years. Before moving to the Great Lakes, I was involved intimately with the Comprehensive Everglades Restoration Plan, serving as the Director of the Lake Okeechobee restoration

program. In my current position as Director of the Annis Water Resources Institute, I am involved in a variety of restoration efforts dealing with some of the most pressing water resources issues in the Great Lakes, including invasive species, non-point source pollution, impacts of land use change on coastal resources, and contaminated sediments. This morning I would like to draw upon my on-the-ground, real-world experience in implementing or in some cases attempting to implement some of these restoration efforts, and I will focus on three major topics.

The first is, what are the essential components of a successful restoration program? The second is, what have we learned from these on-the-ground restoration efforts? And, third, what are the needs and challenges necessary to move forward with a comprehensive restoration effort in the Great Lakes Basin?

First, what are the essential components for successful restoration? Based on my experience in South Florida and the Great Lakes, successful restoration projects require at a minimum six essential elements. The first is credible peer-reviewed science on which to base our actions. It is critical that restoration activities be predicated on scientific results that have withstood the rigors of peer review. This up-front investment in scientific information will pay dividends many times over in the long run by minimizing the likelihood that ineffective or inappropriate actions will take place.

Secondly, we need a holistic approach. Large-scale restoration efforts require a team of diverse experts to successfully implement a program.

Third, public buy-in. Ecosystem restoration projects must have the approval and backing of the public. This means more than just including them in the early planning stages. It involves communicating with them in a language that they understand, outlining the entire restoration process from the front end, and providing honest input on both the uncertainties of success and the cost estimates associated with the project.

Fourth, we need a long-term dedicated funding stream. Large-scale ecosystem restoration projects are expensive. There is just no way to get around this. To maintain momentum and sustain interest in the project especially when projects are controversial and litigation is looming, which is bound to happen in these kinds of events, it is critical that the funding sources not be ephemeral.

Fifth, we need adaptive management. No project goes according to plan. Ecosystems are notoriously variable in their responses. It is particularly important that flexibility be built into the restoration effort.

And, sixth,we need evaluation and accountability. Large-scale restoration projects attract considerable attention. A rigorous evaluation process must be established to track the success of the project and to provide accountability to the public and the scientific community at large.

The second major topic that I want to focus on is what lessons have we learned from on-the-ground restoration efforts. In order to optimize the process of ecosystem restoration, we must learn from our past efforts. Here are some lessons that I have learned from the work at the South Florida Water Management District and at the Annis Water Resources Institute.

A phased approach to implementation is important. Large-scale restoration efforts consist of numerous components and individual projects. It is important to identify a few projects that will lead to quick success which can be celebrated and help build momentum.

Second, it is critical to acknowledge past and existing restoration efforts. This helps build partnerships, and the approach also makes economic sense as it avoids redundancy and uses the available knowledge base in an efficient manner.

Third, the plan must be flexible. New information, unexpected shifts in ecosystem behavior or changes in political and economic landscapes may require refinement and mid-course corrections.

Fourth, the restoration process must have an ecosystem focus not based on single species management. Ecosystems are complex. Approaches must be based on focusing on the entire ecosystem; otherwise, we don't reveal the linkages and feedbacks among the biotic and abiotic components.

We must also ensure responsible use of our fiscal resources. Public, scientific, and governmental reviews of these studies and designs are necessary to ensure the fiscal resources are used efficiently and effectively.

Sixth, the restoration effort must be interdisciplinary and must be inclusive. A diverse consortium of partners, including Federal and State agencies, academia, local governments, tribal participants, private industry, and the public help to guarantee the feedback and dialogue necessary to improve the plan and keep it moving forward.

And, finally, we need information and education or I&E strategies that reach out to the public. Restoration efforts contain a lot of technical information. It is critical that these I&E strategies be developed and tailored toward the appropriate audience, which helps ensure informed public input.

And then the final topic I wish to address includes the needs and challenges associated with the restoration effort in the Great Lakes. The Everglades restoration plan is a very useful template, but there are fundamental differences between the restoration efforts in the Great Lakes and that in the Florida Everglades. Everglades restoration focuses on only one State and it has one major stressor; its tag line is getting the water right, it deals largely with hydrology.

As we have heard this morning and as you heard yesterday, there are many jurisdictions in the Great Lakes, there are many stressors. But there are certain themes and commonalities that bind the needs and challenges within the Great Lakes, and I want to identify three of each.

The first need is a comprehensive, coordinated monitoring plan that addresses the major stressors to the Great Lakes and which will be used to both establish and refine baseline conditions and to assess future trends.

Secondly, we need effective information and education strategies that engage all sectors of the public in the restoration process.

And then finally, because the plan is expensive, it must be based on long-term dedicated funding streams.

The three major challenges that I see ahead of us are, first, avoiding turf battles. There are an enormous number of parties al-

ready established in the region, each of which have a vested interest. So it will be a major challenge to foster a cooperative, collaborative environment.

Secondly, it deals with knowledge management. As Mr. Stephenson just pointed out, there is a wealth of information currently being generated in the Great Lakes Basin. Much of it is coordinated, but a whole lot of it is not coordinated. This information must be prioritized, it must be placed in the appropriate database management system, and this database must be maintained and updated on a regular basis.

And then, finally, the major challenge that we face is finding and dedicating the necessary funds.

I hope that the guidance and suggestions presented here, which are based on my personal experience and that of many other dedicated people, will help place this issue in a broader and more pragmatic context and be of use to you and the subcommittee.

Thank you again for the invitation to appear today.

Mr. DUNCAN. Well, thank you, Mr. Steinman. You packed a lot into your statement there, and I probably couldn't have done that. I probably couldn't have spoken that fast.

Mr. STEINMAN. Well, with the 6 minutes, I tried to get it all in.

Mr. DUNCAN. Well, in your written testimony that you submitted to us even before yesterday's hearing, you had a statement in there that our staff found very interesting. He said there is often an innate distaste from funding agencies, elected officials, and the public for more studies. Understandably, people want to see tangible action, dirt turned, and on-the-ground results. And you very accurately predicted several of the statements that were made in here in the hearing that we had yesterday. So maybe you are some type of seer or something.

Mr. STEINMAN. I think that is just based on the experience in South Florida.

Mr. DUNCAN. Well, thank you very much.

I will go first to Mr. Costello.

Mr. COSTELLO. Dr. Steinman, let me ask you, you commented about turf battles, and we understand that. But the President's Executive Order, which we all welcome and commend the President for, is an effort to bring all of the agencies, not only the Federal Government but everyone involved with the Great Lakes together. Let me ask you, do you think that the Executive Order, when it is implemented, does it achieve the goal of the designating one person to coordinate all of the efforts concerning the Great Lakes? And I just wondered if you would comment on how helpful you think the Executive Order is and the plan that is laid out.

Mr. STEINMAN. Well, that is a loaded question. I think the Executive Order does provide some guidance, which is very helpful, in forcing the Federal agencies to work together. I think there is still some flesh that needs to be put on the bones. My major concern with what I read from the order is that it focuses exclusively at the Federal agency level. And as I mentioned, for these efforts to be successful they must be inclusive. I did not see anything in there dealing with the private sector, with the academics, with the public. And so even though EPA has been designated—and I think EPA is probably as good as anybody as far as one master, if you

have to have one. I think there just needs to be a lot more detail, and I reserve judgment until I see how that detail comes out.

In South Florida of course we had the advantage of having the Army Corps and the water management district to be the Federal and local sponsor. There doesn't seem to be any template or parallel emerging yet in the Great Lakes for something like that.

Mr. COSTELLO. Mr. Stephenson, in your testimony you indicate that your GAO report calls for increased coordination and someone to take the lead. Does the Executive Order fulfill that, or do we need to go beyond the Executive Order?

Mr. STEPHENSON. The Executive Order, as was mentioned, probably will help coordination among the many Federal agencies that are involved in the Great Lakes, but it is not clear exactly how the Governors Council, the Great Lakes Cities Initiative, and the many other organizations will be involved in that coordination. We think the Great Lakes Act gave EPA authority a long time ago to do this. So the fact that they are chairing this task force makes sense.

Mr. COSTELLO. Mr. Schornack, we talked a lot yesterday in the hearing about the dead zone and not only to Lake Erie but the phenomenon in the Chesapeake Bay, the Gulf of Mexico, and other bodies. What are the trends for the dead zone; and, number two, what does the presence of a dead zone tell us?

Mr. SCHORNACK. Well, the interesting thing about this dead zone—and I saw some of the testimony yesterday—I think it was Tom Skinner's remarks—the IJSC had been involved in identifying phosphorus loadings from wastewater treatment plants and so forth back in the 1960's as being—leading to the initial so-called death of Lake Erie. This time, the death of Lake Erie is looking again to be due to phosphorus loadings. It is an anoxic area. Of course, nothing can live without oxygen that we really care about; and this time it appears to be perhaps fecal deposits from massive numbers of Quagga and Zebra mussels that are filter feeders and add to the phosphorus loadings that way.

We have—a number of scientists—a group called the Lake Erie Millennium Network that was on the lake all year, all last summer and are going to be on the lake again this summer, to determine exactly the cause. But then again, dead zones or anoxic areas in large lakes like this are not uncommon. They are, in fact, a natural part of the process. It is just that the size and scope of this one and the fact that it is growing at such an alarming rate is of great concern.

Mr. COSTELLO. Mr. Chairman, I do not have any other questions. I would like to ask you for unanimous consent that Mr. Stupak's statement appear with Mr. Kirk's and Mr. Emanuel's as well.

Mr. DUNCAN. Right. He wanted to appear on the members' panel, and we will place his statement in the record. Ms. Candice Miller also is in that same situation, and we will put both of their statements in the record.

Dr. Steinman, you mentioned that these water restoration projects are very expensive, and you mentioned two or three times the dedicated funding source, and then you ended up by saying there were problems about getting the funds.

You know, in the private sector, there is tremendous pressure always to do more with less and to save money and watch every

penny. If they don't have that, there are going to be competitors that are doing that, so companies that do not do that are going to be out of business before long.

But in government there are not pressures to do that, or not nearly as much. The pressures in government are always to how can we get more? How can we get more? And yet, what is obvious to almost everyone, we are headed toward a situation when the baby boomers retire that we do not even know where we are going to get all of the money to pay all the civil service and military retirements and the Social Security and the Medicare and the Medicaid and so forth.

So how can we reconcile those two—in other words, get those trains off the same track so that there is not going to be a big collision here? In other words, if it is not obvious to people in your situation, I think it should be, that people in your line of work are going to have to start figuring out ways to do more for less. What do you say about that?

Mr. STEINMAN. I agree with you 100 percent, Mr. Chairman. I would say that we have already engaged and are initiated along that pathway. Some of the things that we do in order to enhance our accountability is definitely these performance metrics to make sure that we are meeting what those needs are and be able to report back to either our elected officials or to the public constituents that we are doing what we said we were going to do, we are doing it on time, we are doing it within budget, and we are meeting those kinds of goals.

As far as the larger issue as to where the Federal Government or the State governments prioritize their dollars, that is why we elect you.

Mr. DUNCAN. Well, we are trying, I can tell you that.

I mentioned coastal Louisiana and the Everglades and the Upper Mississippi a while ago. But we have these tremendous projects all over the country that people are coming to us, wanting us to do. A lot of us think we are spending these hundreds of billions in other countries and that we need to bring some of that back home.

Mr. Stephenson, yesterday, particularly Mr. Pearce of New Mexico spent a long time talking about how we seem to be throwing money and not really finding out whether we are getting good results or whether we are spending this money effectively. How do we do a better job of that, to find out which programs are working and which ones are not?

Mr. STEPHENSON. That is why we put emphasis on the scientifically based monitoring system and indicators that we do not think exist. There are lots of different efforts. Some of them, like the water data collection efforts, are voluntary, and we do not have a very sound way to weigh the value of these efforts. Therefore, have a set of indicators is needed so you can measure progress.

There is a lot of money going into the Great Lakes. I did not mean to imply there was not. There is $3.9 billion over 10 years, but we do not feel like the tools are in place to ensure that these funds are efficiently spent right now.

Mr. DUNCAN. Well, Mr. Jones, Ms. Bodine, our Staff Director, tells me that you have identified over $9 billion of authorities out

there that could be tapped into to do a lot of work. Would you tell us about that?

Mr. JONES. Mr. Chairman, thank you. One of the things I want to talk to GAO about is, as we, in the priorities project, have looked at items, and when we look at our short-term ask, I think we do have to balance a budget in the State of Ohio, and I can assure you over the last 2–1/2 years, I have been cutting. It sometimes seems like that is all I get to do. But that means we have to be more creative.

When we started looking at what are we going to ask Congress for in the short term, understanding it may be a while before we get a $4 billion or a $6 billion Great Lakes proposal is what is out there now, our short-term ask, the letter that we ultimately sent to the members of the Appropriations Committee, taking out the revolving loan fund which is I think $1.4 billion, is about $191 million in this appropriation cycle. I made a quick look, and every one of those are already authorized, most of which are not appropriated at the authorized level.

So when we started looking at all of these programs that are directed towards the Great Lakes, one of the things we saw fairly quickly is there seems to be a lot authorized that does not necessarily end up getting appropriated. I certainly understand the process and appreciate the pressures that are on that, and I think one of the things that I take from that is the need for us as a region to prioritize what we want and what we think needs to be done in the short term in terms of Great Lakes restoration, and that is a fundamental purpose of the governors' priorities initiative.

That is, we need to tell Congress these are the things that, collectively, the eight Great Lakes States—and we have included the participation from the Canadian provinces. These are the things that we need to prioritize in terms of protecting, restoring the Great Lakes. Because it is tremendously expensive.

If I could real quickly on the measurement—there is a question of what you measure, but it is also how you measure. For example, one of the wayS you measure an area of concern is, if it is delisted, which means you have to completely finish. Well, when you are talking about the restoration of a complex ecosystem, it can take a tremendous amount of time.

Earlier this year, we moved on the fish deformities for the Black River, which is an area of concern, from ″listed″ to in ″recovery.″ now, the Black River remains as an area of concern. It is not—finished, but we have gone from a situation where the Ohio Department of Health had a no-contact listing for that. In other words, do not even touch this water. Do not dip your toes in. We have now, because of sediment removal, fundamentally reached a point where it can be used for recreation again.

So it is not just what you monitor but how you monitor and how you determine you are done and, in some cases, in fact, the Black River, we will not do more on the Black River. We will continue to maintain, but it is now the natural process that will take it to the ultimate delisting in our view.

So I think there are a number of things that go into this before you get to the end, which is why the coordination is so important.

Mr. DUNCAN. Mr. Schornack, we are spending a lot of time and money on this. Are you satisfied with the attention that is being paid to the Great Lakes from your Canadian counterparts, are you getting good cooperation?

Mr. SCHORNACK. I would say that in both as we have recognized in America and the same recognition exists in Canada that there continues to be a need for investment, particularly in the areas of concern.

But I will note I think Canada has the luxury of having mainly just one province engaged here, and that is the province of Ontario, and they have succeeded in delisting, as the term was noted by Chris, two of their areas of concern. The majority of their remaining areas of concern are basically listed as the approach to cleaning them up is natural recovery. Their areas of concern are quite different. They are not as contaminated with persistent toxic substances, for example. They lean towards the side of habitat degradation.

But to your main question about the cooperation, yes, I think the cooperation is there. There are binational committees between Region 5 and EPA and a similar organization in Canada that worked very cooperatively and are in constant contact, and I think they do a commendable job of coordinating. There is the shared recognition that really more needs to be done.

Mr. DUNCAN. Well, thank you very much.

Mr. Jones mentioned two or three times priorities, the word ″prioritize.″ we heard that often in here yesterday. We charged the five Federal agencies with the responsibility of coming back one year from now to tell us what real actions they have taken, so we could at least maybe in some small way try to help make sure that this Executive Order just did not result in another study, as so many people mentioned.

What should we expect one year from now, or what should we listen for, or what do you think should be the highest priority? I would like maybe each of you to comment on that. I would like to hear what the panel has to say.

Dr. Steinman?

Mr. STEINMAN. Thank you, Mr. Chairman.

Mr. DUNCAN. What kind of progress can we reasonably expect?

Mr. STEINMAN. Well, I am assuming you mean progress with respect to the report, not on the ground progress; and what I would like to see is the report, when it comes back to you in one year, contain a couple of different elements.

One, it would provide a very clear, comprehensive strategy for what the restoration program would entail, who would be involved, and what the various components would be. And there would have to be some flexibility built in, but it would not be composed of a lot of vagueness. It would really have to get into some of the specifics. That would include the time lines, it would include the players, and have some general estimates of what the cost would be associated with those projects. I would suspect there would be a number of components which would then be broken down into some level of specific projects associated with it.

It is a really interesting question I think both from a practical point of view and an intellectual point of view as to whether the

group of Federal agencies will address it from a lake-by-lake basis, will they address it from a functional basis—that is, the major stressors that you have heard about: invasive species, contaminated sediments—or do they deal with it on a localized-by-localized basis. There is some real thought that needs to go into that to figure out what the most effective strategy is going to be. At this point, I just do not see what is emerging.

Mr. DUNCAN. So real specifics and details as to the projects, general time lines, the specific players, and then as specific or as close to detailed estimates as to the costs?

Mr. STEINMAN. That is correct.

Mr. DUNCAN. Mr. Schornack.

Mr. SCHORNACK. Well, Mr. Chairman, I am going to be real simple. I am going to keep it to two top priorities.

From my perspective, the very top priority, the most solvable problem out there is to deal with the invasive species that are really, really damaging the lakes and our ability to use them. I would hopefully, at the end of one year, like to have seen this Congress act on the reauthorization of the National Aquatic Invasive Species Act, putting in a tough standard, providing for the opportunity in the case of the Great Lakes for the binational cooperation of Canada and the U.S. to arrive at a standard—biologically protective standard for the lakes, and then also to have completed the construction of the second barrier down in Chicago and have that first barrier being redesigned perhaps and made permanent. It is really an experimental and temporary barrier.

The second priority—and I think it is the one where we can really apply good accountability because we can count—and that is in the areas of concern. I would hope that we have this countdown-to-clean going on. It has been going on for 2 decades. We have only had two areas delisted. They are both in Canada. And the Black River, as Chris mentioned, we are approaching that and also in Preskill Bay in Pennsylvania, I think it is, are approaching two areas to be delisted for the United States.

I would hope that the President's proposal to fully fund the Legacy Act would be adopted by this Congress and would be moving well in that direction.

Mr. DUNCAN. All right. Thank you.

Mr. Jones.

Mr. JONES. I might just talk process a little bit. What I would hope is a little bit more nebulous but I think that much more important.

We had a similar situation in Ohio. We have lots of agencies that touch Lake Erie: the Environmental Protection Agency, the Department of Health, the Department of Natural Resources, Department of Development, and the Department of Transportation. A lot of people touched it, and everybody had their corner of the world. What we did was create a Lake Erie Commission with the Chair, and we have rotated that. But the Chair ultimately makes decisions, and we come to consensus on policy direction.

Congressman Emanuel talked about everything has been said, we just have not heard everybody that needs to say it. Well, that is what I think is the significance of the executive order. When the

governor said it, the State agencies in Ohio did it. The President has said it, and the Federal agencies will now need to coordinate.

To the extent that they, over the course of the next year, carry that through, they actually get together with senior level people to coordinate their efforts and then coordinate with the mayors, with the governors, with the various stakeholders, the work will take care of itself. There are, as you heard, 180 some odd programs directed towards the Great Lakes. Someone just needs to get them all going in the same direction in a prioritized manner: What is most important right now?

To the extent that that starts to happen over the course of the next year, I think you will see the specific actions that—some of which have been mentioned today. The barrier to prevent the Asian carp, Legacy Act funding. Those things follow from the clear direction on the Great Lakes.

Mr. DUNCAN. All right.

Mr. Stephenson?

Mr. STEPHENSON. I still think that the recommendations in our report from last year stand. We think we need to get organized, basically. We are not organized, and that has been the problem. I think Congressman Kirk mentioned how this occurred through various pieces of legislation, everybody has their own rice bowl, and everybody is probably doing a good job, but there is no overarching strategy.

So I would want to see an action plan, with a clear set of priorities agreed upon by all the parties here: the States, the Federal Government, the cities, and all the other local stakeholders. Once you have that agreed-upon set of priorities, then you can establish an indicator and monitoring system to evaluate progress against those specific priorities, and I think you will see some real ability to create sometging like a report card of the Great Lakes and see what kind of progress is being made. Admittedly, you will not have all the resources you want, but at least you will have an agreed-upon set of priorities so you know what to fund first, second, third, and fourth, and so forth.

Mr. DUNCAN. So you have a big job trying to keep up with all of those different programs, those 180 programs, and see which ones are working and which ones are not. In fact, I can tell you this: All of you have very important jobs. We have mentioned in here several times that there is almost nothing that the people of this country take for granted as much as they do water; and yet there is just about nothing as important as a good, clean, safe supply of water.

So at any rate, Mr. Costello, any closing comments?

Mr. COSTELLO. Mr. Chairman, thank you.

Yesterday, you said to Mr. Skinner and the entire panel that you hoped that a year from now that they would come back and give us a progress report. I hope at the very least that Mr. Stephenson's comments about laying out an action plan and agreeing on priorities, that we will at least be at that stage somewhere along the line and can get a firm plan as to where we need to go and to have everyone in agreement as best we can.

I thank all of the witnesses for being here today, and I thank you for calling this hearing.

Mr. DUNCAN. Well, this has been a very informative and helpful discussion here this morning. That will conclude this hearing.

[Whereupon, at 11:15 a.m., the subcommittee was adjourned.]

Statement of the Honorable Rahm Emanuel

Hearing on "Great Lakes Water Quality and Restoration Efforts"
For the Committee on Transportation and Infrastructure
Subcommittee on Water Resources
May 21, 2004

Mr. Chairman, I appreciate the opportunity to testify on Great Lakes Restoration, an issue of great importance to me.

The Great Lakes are, in President Bush's words of this past Tuesday, a national treasure. Comprising 20 percent of the world's surface freshwater, the lakes provide drinking water to 28 million Americans. But, in the region, and particularly in Chicago, the Great Lakes are much more than a source of water. The lakes fuel the economic fires of the region, assisting in transportation and encouraging tourism. The lakes also add to the character of the region. Lake Michigan is as important to Chicago's identity as the Sears Tower, the Field Museum, the Cubs, deep dish pizza and our famous politicians.

As a child I cherished my days at the beach. But the memories are not all pleasant. I vividly remember how we would run to the water's edge, dive in and swim out twenty feet to get past the dead fish and debris. Thirty years after the Clean Water Act, the Great Lakes are much cleaner, but they still face an uncertain future. More than 140 invasive species plague the lakes, and new ones, like the Asian Carp are at the back door. Mercury deposition from coal-fired power plants, and the accumulation of other toxins, has led to more than 1,500 fish consumption advisories. And nearly every time it rains, we still dump raw sewage into the lakes through combined sewer overflows.

Not surprisingly, evidence indicates that the health of the Great Lakes is deteriorating. Last year, beach closures increased 62% from 919 in 2002, to 1473 in 2003. Preliminary results from several studies indicate the Diporeia, a small shrimp like creature which comprises a good portion of the Great Lakes food web, is disappearing in many lakes. And possibly worse, old problems are resurfacing. For example, the Lake Erie dead zone, an area of water with oxygen levels so low that no life can be sustained, has reappeared.

Obviously, if the Great Lakes are allowed to deteriorate, the entire Great Lakes region will be adversely affected. We in Congress cannot allow that to happen, and with these hearings, and the President's recent Executive Order, I am encouraged that both Congress and the White House are beginning to seriously consider Great Lakes restoration.

As you know, last year I introduced HR 2720, the Great Lakes Restoration Financing Act. HR 2720 provides states with $4 billion in block grants for Great Lakes restoration. This money could be used to deal with invasive species, toxic sediments, and/or wetlands preservation. But, it's up to the states and EPA on how the money should be spent. Each state has a unique set of problems, and our bill allows the states to work with EPA to

develop and implement a tailored restoration strategy. Further, it provides a coordination mechanism to ensure the money is being spent wisely. But, the most important part of this legislation is that it provides the funding the Great Lakes are so sorely lacking.

But, I would like to also note HR 2720, was developed as an outgrowth of the current Administration's policy. On April 2, 2002, then EPA Administrator Christie Todd Whitman announced the "Great Lakes Strategy 2002" in Muskegon, Michigan. This plan was developed based on the years of research into the state of the lake and was supposed to provide a road map of how to improve the health of the Great Lakes. Using the Great Lakes Strategy as our guide, we drafted HR 2720.

Today, HR 2720 has the support of 106 Members of the House, 61 Democrats, 44 Republicans, and 1 Independent. Fifteen Senators support the bill, 9 Democrats, and 6 Republicans. All 8 governors from the Great Lakes states support the bill, 5 Democrats and 3 Republicans. We have the support of 40 mayors, all the mayors from cities along the lakefront with a population of 50,000 or larger. And we have the support of 43 advocacy organizations – groups ranging from the Lake Michigan Federation, to the National Marine Manufacturers, to Ducks Unlimited, to the Lake Carriers Association. This is an unprecedented coalition. I am not aware of any other time when Federal, state, and local governments, and the advocacy community have come out so strong in favor of a Great Lakes proposal. This broad coalition, presents an opportunity to actually do something to help restore the health of the Great Lakes that is more than a study. We must take advantage of this moment in history.

This week, the President joined the ranks of those concerned about the Great Lakes when he signed an Executive Order establishing a Great Lakes Interagency Task Force. This is a positive step, but I am concerned his executive order may lead us down a path we have traveled many times before.

According to the Executive Order, a Great Lakes Regional Working Group will be created within the Task Force. This Working Group will be comprised of:

> "The Great Lakes National Program Office of the Environmental Protection Agency; the United States Fish and Wildlife Service, National Park Service, and United States Geological Survey Within the Department of Interior; the Natural Resources Conservation Service and the Forest Service of the Department of Agriculture; the National Oceanic and Atmospheric Administration of the Department of Commerce, the Department of Housing and Urban Development; the Department of Transportation; the Coast Guard within the Department of Homeland Security; and the Army Corps of Engineers within the Department of the Army."

After the signing, he issued a statement saying:

> "The Task Force will address environmental and natural resource issues of national concern and better coordinate the region's sustainable development and restoration. It will harness the collective efforts of the Federal government, Governors, Mayors, Members of Congress, tribes, and citizen stewards to ensure that the greatness of the lakes endures for generations."

I appreciate, and encourage, the President's support for the Great Lakes, but I fear his policy will do little more than generate another study. In fact, President Bush's recent Executive Order is nearly identical to the "Great Lakes Strategy 2002," the document on which we based HR 2720.

Consider Whitman's words at the release of the "Great Lakes Strategy 2002":

> The "Great Lakes Strategy 2002 [was developed] to advance Great Lakes protection and restoration efforts in the new millennium. Great Lakes Strategy 2002 was created by the U.S. Policy Committee – a forum of senior-level representatives from the Federal, State, and Tribal agencies responsible for environmental and natural resources management of the Great Lakes – to help coordinate and streamline efforts of the many governmental partners involved with protecting the Great Lakes."

What entities comprised the U.S. Policy Group? Army Corps, EPA, Coast Guard, Agriculture, NOAA, Fish and Wildlife, USGS, and the Forest Service. The two plans are eerily, similar.

Studies of the Great Lakes and task forces are not a 21st Century creation. In fact, the Boundary Waters Treaty of 1909 led to the International Joint Commission, a bi-national agency tasked with management of the waters shared between the United States and Canada. Additionally, in 1955 the Great Lakes Commission was created:

1. "To promote the orderly, integrated, and comprehensive development, use, and conservation of the water resources of the Great Lakes Basin (hereinafter called the Basin).
2. To plan for the welfare and development of the water resources of the Basin as a whole as well as for those portions of the Basin which may have problems of special concern.
3. To make it possible for the states of the Basin and their people to derive the maximum benefit from utilization of public works, in the form of navigational aids or otherwise, which may exist or which may be constructed from time to time.
4. To advise in securing and maintaining a proper balance among industrial, commercial, agricultural, water supply, residential, recreational, and other legitimate uses of the water resources of the Basin.
5. To establish and maintain an intergovernmental agency the end that the purposes of this compact may be accomplished more effectively."

I understand the President was responding to the last year's GAO study which argued the Great Lakes suffer from a lack of coordination. Yet the evidence suggests the lakes are suffering not from a lack of coordination, but entirely too many efforts to coordinate. Bush's Interagency Task Force will no doubt "discover" the same problems identified by the "Great Lakes Strategy 2002", which highlighted the same problems that the numerous preceding studies indicated. We know what needs to be done. The Great Lakes need less talk and more action.

I am not alone. Just yesterday, for example, the *Detroit Free Press* ran an editorial titled "Lakes task Force: More than another report, Great Lakes need action." In the editorial, the *Free Press* noted, "Nobody really needs another report. In fact, any number of dedicated federal employees already at work here could write up goals and measures in a week."

The good news is that we have a solution. HR 2720 provides the money and coordination that some say is lacking. But more importantly the bill has unprecedented support in the region.

Still, questions have been raised about HR 2720, and indeed the very concept of Great Lakes restoration. I would like to address some of those questions now.

First, some have questioned why the Great Lakes are so special that they deserve more attention than any other body of water in this country? I would argue that the lakes are a unique resource. Indeed they are 20% of the worlds freshwater, yet they are also a unique ecosystem, and one we barely understand. But the Great Lakes have been neglected compared to other resources such as the Everglades and the Chesapeake Bay. It's not that those projects are unworthy, but rather, that the Great Lakes are equally worthy. So ultimately, it is not a question of elevating the Great Lakes, as much as giving them the resources they deserve.

Second, one might wonder how the advisory board outlined in my bill is different than the many studies done in the past? While a good question, the difference is that the advisory board outlined in the bill is tasked with prioritizing how the money in the bill is allocated. Still, in composition, there is little difference between the advisory board and the task force recently created by the President's Executive Order. As such, I would not be opposed to amending the legislation to accommodate the President's new Interagency Task Force. I welcome your input on this issue.

Third, some have said that even if Congress were to approve the bill and fully fund it, states would not be prepared to spend the $800 million allocated each year. This is simply an argument I cannot, and will not, accept. As I've noted, we know what needs to be done, and we know the money proposed in this bill won't be enough; it's just a down payment. The International Joint Commission, for example, has estimated it will cost at least $7.2 billion to remediate the 31 Areas of Concern in the United States. But the same people who make this argument are also advocating a study. I understand there are

some technical issues to solve, but these are not concerns which should delay the necessary projects. In Illinois, for example, we know we need to deal with the Asian Carp by building a second permanent barrier, and we need to stop sewer overflows by completing the Deep Tunnel project. These are examples of two projects Illinois could start tomorrow if we were to pass HR 2720. I know every state has come up with their own list of immediate projects. In fact, the governors have already submitted a list of priorities.

Fourth, the White House claims we have spent more than a billion dollars on the Great Lakes in the past few years. Further they argue their budget has increased Great Lakes spending by $48 million. This begs the question, of whether or not more money is necessary? The reality is that while more than $200 million is spent on the Great Lakes annually, very little of this has gone to restoration. Further, the costs to actually improve the health of the lakes are enormous, and well beyond what is currently being spent.

Regarding the Administration's claim of increased funding, two points must be made. To begin, the majority of the increase is earmarked for Great Lakes Legacy Act programs, yet the Administration has under funded this program by $35 million in 2004. Additionally, as we all know, there is a big difference between what is in the President's budget and final appropriations. I'm hopeful the Administration will honor their pledge of increasing funding for Great Lakes restoration.

Fifth, many have asked how, with a $521 billion budget deficit, we can afford to spend $4 billion on the Great Lakes? I believe that we must invest in the Great Lakes. But, I also know that we can find the money. We're spending $5.1 billion in Iraq on wetlands restoration and water system improvements. They didn't have an Interagency Task Force and we were still able to find the money. And there are options. For example, we could, as the Oceans Commission has suggested, utilize revenues from oil and gas leasing rights. Or we could close one of the many corporate tax loopholes. We have options, and the bottom line is that we can find the money. It's not the money that is lacking, but the political will.

Mr. Chairman, I will end by saying that I am eager to work with this committee on moving HR 2720. We have unprecedented support and an historic opportunity to do something significant to improve the health of the Great Lakes. I welcome your input and am open to all suggestions on how we might improve the legislation. My only concern is that we provide significant resources toward Great Lakes Restoration, and end the perpetual cycle of well-intended studies.

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Testimony by Christopher Jones, Chairman
Great Lakes Priorities Initiative
and
Director, Ohio Environmental Protection Agency
before the
Subcommittee on Water Resources and the Environment
of the
House Committee on Transportation and Infrastructure

May 21, 2004

Mr. Chairman, members of the subcommittee, thank you for the opportunity to appear before you today to discuss the significant need for a coordinated and adequately funded restoration program for the Great Lakes.

The Great Lakes are an ecological treasure. They contain roughly 20% of the fresh surface water on the planet. They supply drinking water for millions of people, provide habitat for fish and wildlife, and encompass many sensitive ecological features such as estuaries and coastal wetlands.

The Great Lakes contribute substantially to the national economy, both as a passageway through which American goods reach the global marketplace and as a recreational destination that anchors a thriving tourism industry. For Ohio alone, Lake Erie tourism is a $7 billion business, supporting well over a quarter-million jobs. The waters of the Great Lakes and their tributaries spawned the cities of America's industrial heartland, and continue to support manufacturing and other commercial ventures.

Recognizing the importance of the Great Lakes to the region's economy and quality of life, the Governors of the eight Great Lakes States formed a non-partisan partnership – the Council of Great Lakes Governors – to address in a cooperative manner our shared environmental and economic challenges. As the current chairman of the Council, Ohio Governor Bob Taft has led the Great Lakes Priorities Initiative. Its goal is to protect and restore our region's greatest natural resource through efficient, well-coordinated programs supported by adequate federal funding.

I should note that we are seeking this federal funding as a supplement to the state and local investment already taking place. A 2003 report by the GAO documents the fact that state and local spending on Great Lakes programs far exceeds the investment by the federal government. While we remain committed to doing our share, we cannot accomplish many urgently needed restoration goals without more federal participation.

In October, the Great Lakes Governors released a list of nine priorities for Great Lakes protection and restoration. They include:

- sustainable use of water resources;
- protecting human health;
- controlling pollution from diffuse sources;
- reducing persistent bio-accumulative toxics;
- stopping the introduction and spread of non-native aquatic invasive species;
- protecting coastal wetland and wildlife habitats;
- restoring Areas of Concern;
- improving information collection and dissemination;
- and adopting practices that protect the environment along with the recreational and commercial value of the Great Lakes.

The States are in the process of holding public workshops throughout the Region to solicit input on these priorities. We are hopeful that at the end of this process, we will be able to represent to Congress that this is a consensus list of priorities around which restoration funding can be structured. I am encouraged by the input we have received thus far that this will, in fact, be possible.

In the meantime, recognizing that passage of a comprehensive restoration bill is some time into the future, the Governors have developed a list of short term funding priorities for consideration by Congress in the current appropriation cycle. The list was presented to the leaders of the Appropriations Committees within the past few days and copied to the members of the region's Congressional delegation. I have included a copy with my testimony.

In addition, the Council hosted a meeting in Chicago ten days ago that brought together policy makers from the States and relevant federal agencies, our Canadian partners, representatives of the region's mayors, environmental NGOs, and members of the business community. That group reached an unprecedented level of consensus about short-term priorities for Great Lakes restoration and agreed on a process for quickly coordinating the many long-term restoration plans already in existence. I am particularly pleased that the group itself articulated the need for better coordination among Great Lakes stakeholders and appears ready to work closely together to present a focused vision and plan of action to Congress.

Among the short-term priorities identified by this broad based group are the following items, which correspond well with the funding requests from the Great Lakes Governors:

Passage of a strong, effective bill to control nuisance aquatic invasive species. Invasive species are changing the ecology of the Great Lakes in ways we don't fully understand. And the change is ongoing, as a new invasive species is introduced to the Great Lakes ecosystem each year. Technical and policy experts are in agreement that this is a serious problem, but one that can be managed with the right controls and the funding to implement them. The longer we delay in putting these controls in place, however, the more serious the problem will become.

The Great Lakes Governors have urged Congress to quickly reauthorize and fund the National Aquatic Invasive Species Act. Great Lakes stakeholders echo that request, and further emphasize the need for a strong bill, such as S. 525 and H.R. 1080, which include provisions that address the specific challenges faced by the Great Lakes.

Particularly vital is funding to construct, operate and maintain the dispersal barriers in the Chicago Ship and Sanitary Channel, to ward off the entry of the Asian Carp into the waters of the Great Lakes. The $8 million cost will protect a Great Lakes fishery that far exceeds that in value on an annual basis.

Increased federal funding for wastewater infrastructure. I know the subcommittee recently heard testimony regarding the need for additional investment in drinking water infrastructure. The need is equally great when it comes to sewers and related infrastructure. As you may recall, U.S. EPA's gap analysis showed a $525 billion shortfall between current levels of spending and the projected need for water infrastructure investment over the next 20 years. Clearly, this need cannot be met without the increased participation of the federal government.

One of the major threats to human health in the Great Lakes and their tributaries comes from combined sewer overflows (CSOs), which discharge untreated sewage during heavy rainfalls. The Wet Weather Water Quality Act of 2000 authorized $1.4 billion nationally to begin to address this issue, but none of those funds has been appropriated. In the meantime, communities with combined sewers are under a federal mandate to prepare long-term control plans that outline how they will eliminate CSOs over the next 15 to 30 years. The price tag is enormous – an estimated $1.6 billion in Cleveland, and $2.4 billion in Chicago, just as an example.

Costly as they are, CSOs are only one of the water infrastructure challenges faced by local communities. From aging wastewater treatment plants to failing on-lot septic systems, the most advanced nation in the world is struggling to manage its sewage. America deserves better than unsanitary conditions that hearken back to the disease-ridden days of long ago. Increased funding for the State Revolving Loan Funds that finance wastewater projects would be a good step toward meeting our infrastructure needs.

Appropriate funding for the Legacy Act. President Bush has proposed to increase Legacy Act funding from $10 million in the current budget to $45 million. The Great Lakes Governors urge Congress to make this appropriation, which more closely approximates the authorized funding level for this law.

The Legacy Act specifically addresses residual contaminants in the Areas of Concern, Great Lakes tributaries where contaminated sediments perpetuate problems such as fish deformities and limitations on fish consumption. Legacy Act spending can make a very positive difference.

In the Black River at Lorain, Ohio, fish were plagued by lip and liver tumors caused by exposure to chemicals in the river sediments. People were warned to avoid contact with the water and sediments in the river. Then the river was dredged to remove the contaminants, and its condition greatly improved. On Earth Day, Governor Taft visited the Black River to announce that it is safe for recreational uses and that U.S. EPA has issued a declaration that natural processes are all that is necessary to completely restore the health of the fish population. This is a graphic demonstration of how Legacy Act funding can help to meet the fishable, swimmable goals of the Clean Water Act.

While the Great Lakes Governors strongly support the passage of comprehensive restoration legislation, they also recognize the overriding need for better coordination among local, state and federal programs so that everyone's investments are well-spent. The stakeholder meeting the Governors sponsored in Chicago recently represented both an acknowledgement of this need and a step toward meeting it. The region's stakeholders expressed interest in forming an advisory group, as called for in S.1398 and HR 2720, even before the bills advance in Congress, to coalesce the many restoration plans already in existence into a single vision for long-term, comprehensive restoration strategies.

On Tuesday, President Bush signed an Executive Order directing U.S. EPA Administrator Mike Leavitt to convene a regional forum on Great Lakes restoration. Governor Taft and Chicago Mayor Richard Daley joined Administrator Leavitt in making this announcement, and they will assist him in calling together a broad-based group that can provide a strong regional voice to advocate for comprehensive restoration of the Great Lakes.

In addition, the President's order seeks to improve coordination among the many federal agencies with responsibilities on the Great Lakes. Given that the GAO report identified lack of coordination as a primary stumbling block, this is also an important step.

The Great Lakes Governors welcome the President's recognition of the importance of the Great Lakes to the nation as a whole, and his willingness to commit his Administration to work with them and the Great Lakes community toward a well coordinated restoration agenda. It is the hope and expectation of the region's governors that the work of the group Administrator Leavitt will convene will ultimately lead to adequate federal funding to implement its restoration strategies.

Mr. Chairman, members of the committee, our pledge to you is that we will put the investment we ask Congress to make in the Great Lakes to good use. We will restore this global ecological treasure to its highest and best use, so that the 40 million people who live in the Great Lakes basin will be sustained by a healthy ecosystem, so that Americans and travelers worldwide can safely enjoy the recreational benefits of the Great Lakes, so that endangered and threatened species in the basin can thrive, so that American businesses can continue to use the Lakes as a shipping portal to the world. These are diverse uses, but this incredible resource can support all of them and more. We must simply take care of it.

Thank you, Mr. Chairman.

Statement of Representative Mark Steven Kirk (IL-10)

Before the
Subcommittee on Water Resources and Environment of the Committee on
Transportation and Infrastructure
U.S. House of Representatives

Hearing on:

Great Lakes Water Quality and Restoration Efforts

May 21, 2004

Good morning Mr. Chairman and Members of the committee:

Thank you for the opportunity to address the Subcommittee on an issue of great importance to my district, the Midwest, and, indeed, the entire nation. I would also like to thank Chairmen Young and Duncan for holding these hearings on this issue. The Great Lakes are a vital resource to everyone in the Midwest and the Illinois 10th Congressional District is no different. The Great Lakes are a unique national and global resource, containing 20% of the global fresh water and supporting within the watershed 38 million people, 25% of the U.S. and Canadian populations. Today, I will undoubtedly echo the statements of all those testifying on the value and need for a coordinated national effort to restore and protect the Great Lakes. Few issues in the Great Lakes region, if any, bring together members of both political parties in such a bipartisan manner.

There are many problems currently facing the Great Lakes, including invasive species, toxic contamination from mercury, and industrial pollution. I would like to address some the issues that directly affect my district and are emblematic of the types of threats facing the Great Lakes ecosystem at large. The 10th District is home to Waukegan Harbor, which many called the worst PCB contaminated site in the U.S. The city of Waukegan lies fifty miles north of Chicago directly on the shore of Lake Michigan. During the 1980's, the International Joint Commission on the Great Lakes, the U.S. EPA and the Illinois EPA designated Waukegan Harbor an Area of Concern (AOC). With help from Congress, this site is nearing completion of broad restoration effort that would move it closer to being delisted as an AOC while giving hope to an economically depressed community.

As a member of the Transportation Committee during the 107th Congress, we passed the Great Lakes Legacy Act, which dramatically increased funding for remediation of contaminated sediments in AOCs within the Great Lakes. I know my

district will directly benefit from this legislation and I applaud President Bush for increasing the funding level for Mr. Ehlers' Great Lakes Legacy Act in the fiscal year 2005 budget. However, Congress must be aggressive in ensuring that remediation occurs at sites by continuing oversight of remediation projects.

Another issue of great importance facing the Great Lakes is the spread of invasive species, which threaten the lakes' environmental and economic security. The newest potential invader, the Asian Carp, poses the greatest threat of these species. According to the Great Lakes Fishery Commission, these carp are a great danger to the ecosystem because of "their size, fecundity, and ability to consume large amounts of food." Asian Carp can grow to 100 pounds and up to four feet long. Similar to their native Eastern Hemisphere habitats, the great Lakes offer the fish the cold-water climate needed to thrive. It is expected that they would compete for food with the valuable sport and commercial fish. If they entered the system, they would likely become a dominant species in the Great Lakes.

It is imperative that a large-scale restoration effort actively addresses the growing threat posed by invasive species, such as reauthorizing of the National Invasive Species Act (NISA). H.R. 1080 and H.R. 1081 introduced in Congress would take strong steps to stop nonnative invaders of all sizes and scope. These bills would take vital steps to stem the flow of invasive species by instituting policies, such as a national standard for ballast water exchange and continuing the Chicago Ship and Sanitary Canal Electronic Dispersal Barrier Program. Estimating the total economic impact of harmful nonnative species is extremely difficult. Although no federal agency accumulates such statistics comprehensively, an estimate by the American Association for the Advancement of Science put damage to the economy at approximately $123 billion annually.

Restoration of the Great Lakes must also include a strong movement to control mercury pollution. Mercury has a severe impact on the health of the Great Lakes. Mercury also becomes dangerous to our citizens when it is increasingly concentrated as it moves up the food chain in the fish eaten by people and wildlife. Mercury contamination in Illinois is so widespread that we now have a statewide fish advisory warning people to limit their consumption of a number of predator species, including walleye and northern pike, two popular game fish of Lake Michigan.

Although mercury pollution is principally introduced in the lakes by coal-fired power plants, an "options paper" released in 1995 by the EPA and Environment Canada on reducing mercury use and its release in the Great Lakes basin contained many action items that sought to address mercury pollution and management. I believe that restoration efforts can extend to these actions items and seek to curb the growing threat posed by mercury in the lakes. I will work to make sure that any restoration of the Great Lakes includes a substantial effort to reduce the threat of mercury.

The passage of the Clean Water Act achieved considerable progress in reducing pollution in the Great Lakes. However, much work remains to be done to ensure the long-term sustainability of the ecosystem. I believe that Congress must seize upon past efforts and move forward with a larger restoration effort that seeks to address the wide-ranging problems facing the Great Lakes.

I was happy to join my colleagues Mr. Emanuel and Mr. Reynolds—along with over one hundred cosponsors-- in introducing a comprehensive Great Lakes restoration bill (H.R. 2720) earlier in the 108th Congress. This legislation seeks to continue the success story occurring on the Great Lakes by focusing restoration efforts on a wide-range of issues, including delisting of AOCs, halting the spread of

invasive species, addressing toxic pollution, protecting wetlands and critical coastal habitats, and ensuring the sustainable use of water resources.

Congress must lead with an effort like H.R. 2720. The federal government has already committed $8 billion to the restoration of the Everglades in Florida. The time has come to begin a comparable effort in the Great Lakes. Congress must clearly define a broad restoration effort because, currently, the protection of the Great Lakes is spread among many different agencies and organizations without a clear, unified mission. On Tuesday, EPA Administer Leavitt announced an Executive Order concerning the Great Lakes Regional Collaboration Plan. I applaud this action by the Administration, but I believe the time to act is now. We cannot afford to put off action to protect this invaluable resource any longer. There is already a large bipartisan network of House and Senate Members in place willing to lead this effort. We ask that the committee work with us on a plan that can reach the President's desk sooner, rather than later.

Thank you for the opportunity to testify before your panel. If you have any questions, I am happy to answer them.

Congresswoman Candice S. Miller

Committee on Transportation and Infrastructure
Subcommittee on Water Resources and Environment

Hearing on Great Lakes Water Quality and Restoration Efforts
2167 Rayburn House Office Building
May 20 and 21, 2004
10:00 a.m.

TESTIMONY

Mr. Chairman, I would like to offer my sincere thanks for your leadership in holding these hearings that focus our national attention on the Great Lakes and how we can progress toward improving their viability for our generation and all that follow.

I certainly appreciate being able to share with you some of my observations as well as some of my ideas on how we might work together to protect our magnificent Great Lakes.

Our nation has devoted much time and attention to preserving some of our most treasured natural resources, as well we should. Certainly the Florida Everglades – or the wonderful national parks we have – come to mind.

And yet it is almost incredible to think that the Great Lakes, which compromises fully one-fifth of the fresh water supply of our entire planet, is usually ignored, or almost an afterthought as a resource of national priority.

The Great Lakes affect the health, the economy, and the quality of life for millions of Americans.

It is interesting to watch all the teeth gnashing about the cost of a gallon of gasoline – now more than $2.00 in most areas of our nation and much, much higher in many places around the globe. Yet the bottled water industry has exploded, and by today's prices a gallon of fresh water is more expensive than a gallon of gasoline.

I predict that one of the principle issues of this century will be water, and particularly fresh water. Who has it? How it is cared for? And how is it used? We can find alternate sources of energy – but fresh, clean water is a finite resource, and quite frankly, water is life.

I have lived my entire life on the Great Lakes, and before I got involved in politics, I made my living off the water. My family was in the marina business, and my hobby has always been boating – all over the Great Lakes.

We all profess to love the water, but we have not treated it very well. Over the years, with increased development and increasing populations, we have contributed greatly to the pollution that has deteriorated water quality.

I can remember as a kid, every boater I knew thought nothing of throwing our empty pop cans or beer cans overboard. Nobody had holding tanks; it just went directly into the lake. Michigan and other Great Lakes states used to dump a lot of its garbage right into the lakes. We just did not know any better.

And yet today, there are some great success stories. Lake Erie, once called a dead lake – a sea of green algae you felt like you were boating across someone's lawn - today is host to some of the best fishing in the world.

Communities are spending billions of dollars to upgrade and right size their sewage treatment facilities to prevent combined sewage overflows and eliminating failing septic systems.

Yet we have such a long road ahead of us. We need to have a long term goal and a broad commitment by all the stakeholders: citizens, businesses, and every level of government, from local levels to state, and especially federal levels.

Just this week, President George W. Bush signed an Executive Order to create the Great Lakes Interagency Task Force, which will be comprised of 10 agency and cabinet officers tasked with providing strategic direction on federal Great Lakes policy. Together, these 10 agencies administer more than 140 different federal programs that help fund and implement environmental restoration and management activities in the Great Lakes, including Lake St. Clair, and other bodies of water within the drainage basin of the Great Lakes.

By combining the efforts of various federal agencies, I strongly believe each will all be more effective in achieving real results in fully protecting 90 percent of our nation's fresh water supply. With the Great Lakes Interagency Task Force in place, we can finally set outcome-based development goals for our lakes, and ensure measurable results.

I have championed the establishment of science-based monitoring to report on a series of water quality indicators and related environmental factors in the Great Lakes in a bill I introduced last year, the *Great Lakes Controlled Data Collection and Monitoring Act.*

The President's Executive Order closely echoes this legislation.

This bill would establish a benchmark for water quality monitoring. Current restoration programs are uncoordinated, unguided and under-funded, meaning the data collected is

inadequate and impossible to measure to see if actual progress is being made. This is a big problem when it comes to maintaining the highest quality standards in our Great Lakes system.

This bill will ensure that we have baseline knowledge of all the bodies of water in the Great Lakes system. The Great Lakes are too important to let quality concerns fall through the cracks. With these improvements in place and with an Executive Order providing direction, Congress can make educated decisions to provide funding to the areas that need it most. For the first time, we would have a real guideline from which to act with regards to Great Lakes water quality.

Furthermore, I believe that the key to restoration is responsibility – and H.R. 2668 would be a solid basis to first of all, determine what is happening, identify deficiencies, and then to determine how to begin restoration efforts. Monitoring must be a part of any comprehensive restoration strategy for the Great Lakes.

Michigan is known as the Great Lakes State - we are surrounded by them and they are our very identity. In fact, if you looked at satellite photographs of the world, there are two things that are clearly visible to the eye: the Great Wall of China and the Great Lakes surrounding the mitten of Michigan.

And yet there are seven other states that border the Great Lakes, and every one of them understands the significance of the natural resource that is dependant on their stewardship.

Let me just speak to several issues that are negatively impacting the lakes and how we might move to address them.

First, the issue of invasive species. Invasive species are one of the most damaging and significant threats to the health of the Great Lakes. Invasive species like the zebra mussel, the goby, and now the Asian Carp are destroying habitats, threatening the diversity of native species and entire ecosystems. Not only an environmental threat, they are a huge economic threat costing an estimated $138 billion dollars every year.

I know Congress has been discussing this issue for years, but in this case, time is our enemy. Ballast water discharged by foreign freighters is the number one source of invasive species. I recognize the cost to the shipping industry to try to eliminate this threat, but I think it is way past due for Congress to pass "The National Aquatic Invasive Species Act."

The Great Lakes are already in danger of becoming an "invader zoo." We cannot keep waiting.

Secondly, another issue that unfortunately dominates news in my district because it happens on such a regular basis is the frequent chemical spills into the St. Clair River. These spills are then carried down into Lake St. Clair, through the Detroit River, and into

Lake Erie. I actually took Homeland Security Secretary Tom Ridge on a helicopter ride to give him an aerial view of what we call "Chemical Valley," which is miles of chemical companies on the Canadian side, who have a very bad environmental record.

Since 1986, there have been more than 700 chemical spills into the St. Clair River, forcing the shutdown of water intakes for millions of people. In many cases, the companies do not notify anyone for days after the spills. Last summer vinyl chloride was spilled into the water. Just a few months ago, more than 40,000 gallons of oil solvent were spilled and a just few weeks ago, yet another chemical spill was dumped into the river.

As you can imagine, these recurring chemical spills have the total attention of the people affected and it is causing huge problems between the two nations as we try to move towards a system of timely notification. We need immediate action between American and Canadian authorities to strengthen regulations and improve the notification process, and most importantly, to try to prevent these spills from happening in the first place.

In this regard, I would recommend that the Secretary of State enter into negotiations with his counterpart in Canada to determine the terms of reference for the International Joint Commission to study this issue and for the IJC to then recommend a plan of action. If the IJC cannot act, we need to think about what steps we must take as a nation to protect our citizens.

Mr. Chairman and members of the committee, while there are many proposals being considered for Great Lakes protection and restoration – many of them costing billions of dollars without providing any real direction – there are also numerous areas where we can provide administrative improvements that are extremely cost effective.

I appreciate the opportunity to add my voice to the growing chorus of boaters, anglers, hunters, and the millions of everyday citizens who live in the Great Lakes Basin and those who come to recreate there. We all share a love for the Great Lakes and a commitment to do a better job of allowing Mother Nature to keep her house in order.

All of us working together can help restore the greatness of this magnificent natural resource.

The Honorable Dennis Schornack
U.S. Chairman, International Joint Commission
Transportation and Infrastructure Committee Water Resources Subcommittee
"Great Lakes Water Quality and Restoration"
Friday, May 21, 2004

Chairman Duncan, I appreciate the opportunity to address the complex and vitally important issue of Great Lakes water quality and restoration of the world's most precious freshwater resource. In fact, restoring the greatness of the lakes is a top priority of the International Joint Commission (IJC) under the terms of the reference articulated in Article VII of the Great Lakes Water Quality Agreement. I should note that my comments today are my own and do not necessarily reflect the views of the commission as a whole.

The International Joint Commission

Created by the Boundary Waters Treaty of 1909, the IJC prevents and resolve disputes between the United States and Canada regarding our shared waters. We also operate 19 dams and other control structures on the shared waterways that traverse more than 5,000 miles of the U.S.-Canadian boundary.

The IJC is made up of three commissioners appointed by the President of the United States with the advice and consent of the Senate and three appointed by the Governor-in-Council of Canada (the cabinet). Commissioners serve as independent watchdogs without instruction from our respective governments. Upon taking office, commissioners take an oath to exercise judgment independent of the very governments that appointed us and to serve the common good of the citizens of both countries. We operate as a unitary body that uses joint fact-finding to make decisions by consensus based on the best available science.

The treaty that created the IJC gave each nation equal rights to use our shared waters, including the Great Lakes, but with those rights came important responsibilities. For example, Article IV stipulates "waters flowing across the boundary shall not be polluted on either side to the injury of health or property on the other." In addition, Article VIII sets the order of precedence for the use of boundary waters:

1. domestic and sanitary purposes;
2. navigation, including the service of canals for the purposes of navigation;
3. power and for irrigation purposes.

Over 60 years of successful work under the Boundary Waters Treaty led the U.S. and Canada to once again turn to the commission to play a key role in monitoring and assisting in the implementation of the Great Lakes Water Quality Agreement of 1972. Specifically, every two years, we issue a report in which we evaluate the progress of the two countries in meeting the terms of the agreement, including the restoration of beneficial water uses in areas where they have been severely degraded.

The operating principles of the IJC – our independence, the equality of commissioners and countries, our binational science-based approach and our objectivity – make the IJC the ideal watchdog over how well the countries keep their promises under the Great Lakes Water Quality Agreement. The IJC plays a key role in assessing progress and assisting in the implementation of the agreement.

What is Restoration?

While "restoration" is the goal of the Agreement and of legislation that has been proposed, the definition of the term remains elusive. "Restore the Greatness" is a powerful theme, and it even fits on a bumper sticker. But what does it mean? A colleague recently described restoration as a "social dialogue to discern how we want to design the ecosystem of which we are a part."

Defining restoration means that we must first define priorities. Setting priorities is absolutely critical so that we know where to start – where to spend the first dollar. At the same time, it is just as critical to set goals or endpoints, so that we know when we're done. That's how we can figure out how much it will cost. And all along the way, we need mileposts so that we can measure progress or to put it more bluntly, the "return on our investment." This process will help us define what we mean by "restoration" so that we know when we've arrived at our destination.

From the perspective of the IJC, the Great Lakes Water Quality Agreement drives our involvement in Great Lakes restoration. The agreement eloquently establishes what I have termed the "three-legged stool" that supports ecosystem health – that is restoring and maintaining the chemical, biological and physical integrity of the Great Lakes.

Quickly, I'd like to highlight each leg of the stool and emphasize that all three legs must be equally strong and equally long or our approach to ecosystem health will become unbalanced and risk being toppled.

Restoring Chemical Integrity – Cleaning Up AOCs

When it comes to priorities, there is no doubt that cleaning up Areas of Concern (AOCs) in the Great Lakes must be a top priority for the investment of public resources. These toxic hotspots, contaminated with a legacy of pollution dating back more than 100 years, are the primary locus of food chain contamination, leading to elevated concerns regarding human health. Of the 43 AOCs in the U.S. and Canada, only two have been removed from the list so far and both are in Canada. None of the five binational or 26 U.S. only sites have been delisted. Our countdown to clean – two down in two decades – is painstakingly slow.

But that is changing because of President Bush's commitment to fully fund the five-year $270 million Great Lakes Legacy Act. The president should be commended for committing $45 million in the '05 federal budget – four times this year's funding – to remove contaminated sediment in AOCs. I urge Congress to keep that commitment.

Some have criticized funding for the Legacy Act a being a "drop in the bucket." But the EPA's Tom Skinner got it right when he said: "When you have been in the middle of an extended drought, it's the wrong time to complain when it starts to rain." What makes sense about the Legacy Act is that it is all about projects and progress, not just planning and process.

Spending on cleaning AOCs is only now ramping up. Let's learn from the implementation of the Great Lakes Legacy Act, develop targets, actually move toward the goal of having ten sites delisted by 2010, and as programmatic capacity develops, take a look at expanding the program. The bottom line is that cleaning up the legacy of pollution is clearly priority one in restoring the chemical integrity of the Great Lakes.

Restoring Chemical Integrity – Balancing Risk and Return

Other priorities with respect to chemical integrity are not so clear-cut. For example, it is time to stop dividing the periodic table into good elements and bad. The very concept of sustainability is derived from the responsible human use of all the elements that were forged in the fires of creation and their many and diverse combinations.

One such element is mercury. It concerns me greatly that the debate over regulating mercury has become increasingly polarized and politicized at the expense of science. For example, most scientists would tell you that the health effects of low-level mercury exposure are uncertain and not adequately explained by current research. Therefore, logic tells me that if health impairments cannot be identified, then neither will we be able to identify health improvements from reducing mercury emissions.

Because of this uncertainty, some say we should avoid all risk. But the reality is there is no such thing as a risk-free environment. Rather, we must live in a risk-benefit environment. We make trade-offs every day that allow for scarce resources to be allocated where the benefit – the return on investment – is highest.

That's precisely why I believe that the Administration's cap and trade proposal that captures the co-benefits of NOx and SOx reductions with reductions in mercury emissions from coal-fired power plants is the right path. The proposal is a rational, cost-effective approach that encourages clean-up at the highest emitting plants first and allows states to allocate emissions credits in such a way as to avoid local hotspots.

I am also concerned that while the U.S. is embarking on what may be the world's most ambitious and certainly the most expensive attempt to control mercury emissions from coal-fired power plants, the world's biggest users of coal have no such intention. For example, China accounts for 55 percent of global mercury emissions and its share is rapidly growing – a 25 percent increase in emission in the last five years alone.

As a result, a more stringent and costly effort to control mercury emissions in the U.S. could have a very unfortunate unintended consequence. That is, energy prices for manufacturers and for consumers could be driven up by an estimated 8 percent, reducing the ability of American companies to compete, driving even more jobs and economic growth to China. In

return, what do we get? More mercury will be blown here in the atmosphere because of their insatiable appetite for coal. I am not an economist, but it seems to me that trading jobs for mercury is a pretty lousy deal.

Restoring Biological Integrity

Let's turn to the biological leg of the stool. To me, aquatic invasive species are the number one threat to the biological integrity and biodiversity of the Great Lakes. Researchers will soon announce that they have identified 181 invaders in the waters of the Great Lakes. New invaders are being identified at a pace of two new species each year, bringing our Great Lakes ecosystem to the verge of invasional meltdown.

Please, understand that this biological pollution is just as persistent and just as damaging as any toxic chemical, even more so, because chemicals don't reproduce. Invaders like the Asian carp can lay upwards of two million eggs a year! Just listen to a recent report from a biologist working on the Illinois River, just 50 miles or so southeast of Chicago and Lake Michigan:

> "For the past two days the silver and big head carp have been jumping just below the power house on the downstream side of the dam. It is the most awesome sight I have ever seen! It looks like something out of outer space. There are these HUGE fish jumping 6-8 feet out of the water...one, two and three at a time.... today it was just incredible. You don't even need binoculars. They are as clear as a bell out there. And they are scary too. Just to think what they can do to the ecosystem of the river and also harm to the recreational boaters."

Just imagine how these up to 100-pound aquatic vacuum cleaners could devastate the $4.5 billion fishery in the Great Lakes. That's the bad news. The good news is that preventing the onslaught of aquatic invasive species is the most solvable problem in the Great Lakes today.

Why? Because we know that by far, the busiest pathway for invasion is ballast water discharged into the Great Lakes by foreign, ocean-going vessels. Just as zero discharge is the goal agreed to by the U.S. and Canada when it comes to persistent toxic chemical releases, zero discharge of invasive species should also be the goal of any ballast water discharge standard.

To achieve that goal, we should look beyond shipboard ballast water treatment systems to other solutions, including shore-based treatment and maybe even the notion of keeping ocean-going ships that pose a risk of releasing biological pollution out of the Great Lakes and moving the cargo to Lakers or other modes of transportation. Closing the door to invasions may be that important. Let's focus on how to move cargo, not creatures.

The International Maritime Organization's ballast water convention is a step in the right direction, but it's not tough enough and will take too long. I commend the U.S. Coast Guard for their work negotiating this convention. They and their colleagues from Canada fought hard for tougher standards but they came up short. But they did succeed in negotiating a provision allowing party countries and regions to adopt tougher standards to protect vulnerable ecosystems like the Great Lakes. The opportunity that Congress has now is to take the tough standard the

Coast Guard fought for at the IMO and insert it into the National Aquatic Invasive Species Act. Pass NAISA, set the standard, and the world will follow.

Restoring Physical Integrity

The third leg of the stool – physical integrity - might be our greatest restoration challenge. Hardened shorelines, habitat destruction, and dramatically altered hydrological flows all challenge the sustainability of our shared ecosystem.

In this regard, I am impressed with what Chicago Mayor Richard Daley has done to incorporate conservation concepts into urban designs that soften the impact of the human footprint. Mayor Daley is moving Chicago to build permeable parking lots, to better manage the timing and treatment of storm water flows, and to even install green roofs on buildings like City Hall.

I am also excited and encouraged by the IJC's own Lake Ontario/St. Lawrence River Study – a $20 million examination of how to change our orders for the operation of the Moses Saunders Dam for the first time in nearly 50 years. We are looking to manage water levels and flows not just for hydropower and navigation, but also for conservation concerns such as fish spawning and loon nesting as well as addressing the concerns of riparians and recreational boaters.

All along the shores of the Great Lakes, members of Congress, mayors, governors, activists and industry are looking at new ideas to restore physical integrity so that water no longer meets concrete at the shoreline, but rather sand and natural habitat. One example is the new Tri-Centennial State Park in Detroit that opened just yesterday. Situated on the Detroit River, it is Michigan's first urban state park.

As with many restoration projects, restoring physical integrity can be expensive, but I think the returns might possibly be the most rewarding of all – growing cities, vibrant, alive lakefronts, clean beaches and abundant wildlife.

Review of the Great Lakes Water Quality Agreement

Now, let me bring the three legs of the stool back together again in the context of the upcoming review of the Great Lakes Water Quality Agreement. Conducted by the governments of the U.S. and Canada, the review is triggered every six years when the IJC releases it biennial report on Great Lakes water quality.

When it was written in 1972 and updated in 1978 and 1987, the agreement set very clear and specific restoration goals for chemical integrity. But in my view, it lacks specific goals for achieving biological and physical integrity. Arguably, the stool is out of balance. Without a doubt, it hasn't kept up with scientific developments nor does it address contemporary challenges. In short, the agreement is out of date.

That's why I support a comprehensive review of the agreement. We must ask ourselves, what has worked, what has not, and how can we do better? To this end, later this year, the IJC will transmit to the governments our advice on how the review should be conducted.

For example, as part of the review process, I also think we ought to look at the notion of elevating the Great Lakes Water Quality Agreement to treaty status, making it enforceable under law, and giving the U.S. Senate a stake in its implementation. Who knows? Maybe involving your friends in the other body could make a major investment in restoration more forthcoming.

What's important is that a renewed agreement could provide the blueprint for binational actions to restore the greatness of the Great Lakes.

Who is in Charge?

Finally, let me comment briefly on what has become a bone of contention when it comes to Great Lakes restoration – who is in charge? The question was asked very directly by Sen. Voinovich at a hearing similar to this one last year. He wanted to know who was conducting the Great Lakes orchestra.

As noted in a GAO report, there are many programs in many departments at both the federal and state levels that work to restore the Great Lakes ecosystem. However, leadership and coordination is lacking. Tom Skinner and EPA's Great Lakes National Program Office do not have the reach or authority to coordinate programs across more than ten cabinet-level agencies.

To this end, I commend the President for his action earlier this week to put someone in charge – to designate the EPA as the conductor of the Great Lakes orchestra. The executive order President Bush signed creating the Great Lakes Interagency Task Force is the most efficient and effective way of focusing attention on the Great Lakes combined with the clout to develop and implement a restoration plan. In particular, the order correctly recognizes the binational character of the lakes and the commission stands ready to facilitate and help coordinate the achievement of binational restoration goals.

I might also note that the new Task Force should welcome public input and advice from academia, industry, conservationists and the foundation community. Letting concerned citizens who love the Great Lakes be a part of process would serve as a "reality check" and sounding board for task force actions.

When all the players begin playing from the same score and following the same leader, achieving our restoration goals will become a reality.

Thank you and I look forward to answering your questions.

TESTIMONY OF
ALAN D. STEINMAN, DIRECTOR
ANNIS WATER RESOURCES INSTITUTE
GRAND VALLEY STATE UNIVERSITY
BEFORE THE
COMMITTEE ON TRANSPORTATION AND INFRASTRUCTURE
SUBCOMMITTEE ON WATER RESOURCES AND ENVIRONMENT
UNITED STATES HOUSE OF REPRESENTATIVES
May 21, 2004

Good morning. My name is Alan Steinman. I am the Director of the Annis Water Resources Institute (AWRI) located in Muskegon, Michigan. The Institute is a part of Grand Valley State University. Thank you for the invitation to appear before your Subcommittee and testify with regard to restoration activities in the Great Lakes. Prior to moving to the Great Lakes region, I was involved in the restoration of the Everglades, having served as the Director of the Lake Okeechobee Restoration Program for the South Florida Water Management District. This cradle-to-grave restoration effort, which is part of the Comprehensive Everglades Restoration Plan (CERP), involved various elements including scientific research, ecological monitoring, planning, engineering, construction, real estate, and litigation. In my current position, I am involved in a variety of local and regional restoration projects dealing with some of the most pressing water resource issues facing the Great Lakes, including contaminated sediments, impacts of land use change on coastal resources, nonpoint source pollution, and invasive species. Of course, many of these problems are found throughout our country, but given the uniqueness of the Great Lakes, there is a compelling need to address them as expeditiously and judiciously as possible.

My intent today is to draw upon my experience, as well as that of others, in the on-the-ground implementation of these restoration efforts, and in so doing, address the needs and challenges facing the restoration of the Great Lakes and its basin. Most of AWRI's current projects are focused at the local level, but the principles guiding these restoration efforts are applicable to the entire region. The written testimony addresses the following topics:

- What are the essential components for a successful restoration program?
- Examples of on-the-ground restoration projects and lessons learned
- What are the needs and challenges to move forward with a comprehensive restoration effort in the Great Lakes Basin?

What are the Essential Components for a Successful Restoration Program?

Ecosystem restoration is an emerging discipline and is receiving increasing attention in scientific circles. However, successful restoration programs must address more than the science of the system, although that is clearly an essential component. Based on my

experience in south Florida and the Great Lakes, successful restoration projects require, at a minimum, the following elements:

1) credible, peer-reviewed science on which to base actions
2) a holistic approach
3) public buy-in
4) long-term dedicated funding
5) adaptive management
6) evaluation and accountability

Credible, peer-reviewed science: There is often an innate distaste from funding agencies, elected officials, and the public for more "studies". Understandably, people want to see tangible action, dirt turned, and on-the-ground results. However, it is critical that these activities be predicated on scientific results that have withstood the rigors of peer-review. The up-front investment in this scientific information, assuming that the experimental design, scientific analysis, and conclusions are vetted and peer-reviewed, will pay dividends many times over in the long-run by minimizing the likelihood that ineffective or inappropriate actions will be taken.

Holistic approach: Large-scale restoration efforts often require a team of experts to successfully implement a project. For example, the Lake Okeechobee Restoration Program in south Florida requires the acquisition of thousands of acres of privately owned land to build above-ground reservoirs and constructed wetlands. Determining the best location for these construction projects requires that geologists, hydrologists, modelers, and ecologists collaborate to identify the optimum soil type, flow patterns, and biotic sensitivity. In addition, planners and engineers are needed to integrate the sites with existing infrastructure and to design the projects. Real estate experts and lawyers are needed to conduct and finalize the land transactions. Clearly, the public must be behind the project as well, or success is unlikely (see below).

Public buy-in: Ultimately, ecosystem restoration projects that do not have the approval and backing of the general public are doomed to failure. Getting public support is more than just including them in the early planning stages of a proposed project; it involves communicating with them in a language they can understand, outlining the entire restoration process, and providing honest input on both the uncertainties of success (cf. Steinman et al. 2002; Peterson et al. 2003) and the cost estimates associated with the project.

Long-term dedicated funding: Ecosystem restoration projects come in all shapes and sizes, and with varying price tags. However, large projects, which transcend multiple jurisdictions and involve many disciplines, such as in south Florida or in the Great Lakes, are expensive. To maintain momentum and sustain interest in the project, especially when projects are controversial and litigation is a threat, it is critical that the partners recognize that funding source(s) are not ephemeral.

Adaptive management: No project goes according to plan. Ecosystems are notoriously stochastic in their responses, so it is particularly important that flexibility be built into the restoration plan. Adaptive management involves assessing the data collected during the restoration process, comparing how the system is responding to the anticipated results, and fine-tuning the restoration activities to meet the restoration goals.

Evaluation and accountability: Large-scale restoration projects attract considerable attention because of their visibility, funding requirements, and need to balance competing demands for the resources at stake. It is critical that a rigorous evaluation process be established to assess the success of the project and to provide accountability to the public and scientific community at large.

Examples of On-the-Ground Restoration Projects and Lessons Learned

In order to optimize the process of ecosystem restoration, it is essential that we learn from past projects. In this section, I provide a brief overview of the restoration projects in south Florida and the Great Lakes that I have been involved with, and discuss the lessons that have been gleaned from these efforts.

The Comprehensive Everglades Restoration Plan, or CERP, is a framework and guide to restore, protect, and preserve the water resources of central and southern Florida (http://www.evergladesplan.org/). It is an ambitious plan, consisting of 68 major components, with an approximate cost of over $8 billion and a timeline of up to 30 years to fully implement. The principles behind CERP provide some important guidance when attempting to implement large-scale ecosystem restoration projects:

- A **phased approach** to implementation is important. Because large-scale restoration efforts consist of numerous components, projects will differ in scope, cost, and complexity. As the overall restoration effort moves forward in an incremental fashion, it is important to identify a few projects that can lead to quick successes, which should be celebrated, and which will help build momentum.
- It is critical to **acknowledge past and existing restoration efforts**. A large-scale ecosystem restoration project that has national visibility and federal authorization can become a juggernaut, and those people involved in its creation and growth may assume an attitude of omnipotence. This is a sure path to failure, as it will lead to alienation of partners and stakeholders. By building on the past and existing projects, there is a tacit acknowledgement that this work is valued, which helps build partnerships and generates support. This approach also makes economic sense, as it avoids redundancy and uses the available knowledge base in an efficient manner.
- Consistent with adaptive management, the **plan must be flexible**. New information, unexpected shifts in ecosystem behavior, or changes in political and economic landscapes may require refinements and mid-course corrections. It is essential that the restoration effort be structured so that these changes are as seamless and as painless as possible.

- The restoration process must maintain an **ecosystem focus**. Single-species management (e.g. for salmonids) is an easy default mode for resource managers and officials because of its intuitive appeal and relative ease of assessing restoration success. However, ecosystems are complex; approaches based on single-species management do not adequately reveal the linkages and feedbacks among individual biotic and abiotic components. Therefore, this approach often results in unintended consequences elsewhere else in the ecosystem.
- Ensure **responsible use of fiscal resources**. Large-scale restoration plans, such as CERP, and the one to emerge for the Great Lakes, must be largely conceptual in nature. This is a function of the spatial scale and complexity of these systems, combined with their multiple jurisdictions (especially in the Great Lakes with international boundaries). Detailed technical studies and designs will emerge as specific projects and elements are developed within subregions or for specific problems. Public, scientific, and governmental reviews of these studies and designs are necessary to ensure that fiscal resources are used efficiently and effectively.
- The restoration effort must be **inclusive and interdisciplinary**. Large-scale restoration plans that rely on public dollars must be open and collaborative efforts. A diverse consortium of partners involving federal and state agencies, academia, local governments, tribal participants, private industry, and the public helps to guarantee the feedback and dialogue necessary to improve the plan and to keep moving it forward. It is also essential that individuals from many disciplines be involved in the restoration process. The environmental problems facing our ecosystems are complex, and their solutions require an interdisciplinary approach involving not only scientists of different disciplines (e.g. ecologists, geologists, hydrologists, modelers, etc.) but also experts in fields as diverse as engineering, planning, real estate, law, and regulation.
- Provide **information and education** (I&E) to the public. Restoration efforts contain a considerable amount of technical information. It is critical that I&E strategies be developed and that outreach be a fundamental part of the restoration plan. The I&E strategies must be tailored toward the appropriate audience, which will help ensure informed public input.

Clearly, these guiding principles behind CERP are applicable to large-scale restoration efforts in the Great Lakes, as well. The Annis Water Resources Institute (AWRI) at Grand Valley State University has been working on a number of ecosystem restoration projects within the Great Lakes basin. Our experiences and on-the-ground work validate the importance of the above principles in the Great Lakes region, and also provide new insights.

1) One of the most problematic environmental legacies in the Great Lakes is contaminated sediments (see next section for more detail on this problem). AWRI is currently working on, or has worked on in the past, contaminated sediments in the following Michigan locations: White Lake; Muskegon Lake; Lake Macatawa; Manistee Lake, Grand River, and Little Black Creek. Both White Lake and Muskegon Lake are

designated Areas of Concern, and as such, qualify for funding from the Great Lakes Legacy Act.

However, the number of designated contaminated sites in the Great Lakes Basin exceeds the number of Areas of Concern by an order of magnitude—as a consequence, hundreds of contaminated sites do **not** qualify for funding under the Great Lakes Legacy Act. For example, Little Black Creek in Muskegon County, MI flows directly through the municipality of Muskegon Heights, a largely African-American, economically disadvantaged community. Children play in this creek on public park land, despite some of the highest cadmium levels measured in the entire Great Lakes region (940 mg/kg; Steinman et al. 2003). In addition, most of our samples had concentrations of cadmium, chromium, lead, PAH (polycyclic aromatic hydrocarbon compounds), benzo(a)pyrene, and PCBs that exceed the standards generally applied for the protection of aquatic life (cf. MacDonald et al. 2000). Perhaps most disturbingly, concentrations of lead, benzo(a)pyrene, cadmium, and PCBs were at levels that exceed human health criteria for long term direct contact. Technically, restoration of this creek would not be particularly difficult; the technology and knowledge are available. However, the social and economic barriers are formidable. Despite concerted attempts to engage the community, only limited progress has been made. Clearly, a more effective I&E strategy is needed. In addition, because Little Black Creek is not a designated Area of Concern (although a large part of the contamination originates from a Superfund site), it does not qualify for Great Lakes Legacy Act funding. There are many "Little Black Creeks" throughout the Great Lakes region, all in need of effective outreach, public involvement, and adequate funding for ecosystem restoration.

2) Surface water runoff, and its associated pollutants, is a problem in many of the freshwater ecosystems across the nation. The Great Lakes region is no exception. Nonpoint sources of pollution, such as runoff from lawns and streets, cause more pollution than point sources in the United States (Carpenter et al. 1998). Exacerbating this problem is urban sprawl, the efflux of people out of urban areas to rural regions, especially along the Great Lakes coastal reaches (see next section for more detail on this problem). AWRI is currently working on a number of watershed assessments and management plans in west Michigan, partnering with private and public sector entities, and using our expertise in GIS (geographic information systems) technology, nutrient chemistry, modeling, and ecological science to characterize the nature of the problem, recommend science-based solutions, and implement restoration activities where appropriate.

The Muskegon River Watershed is the second largest in the state of Michigan and covers approximately 2725 mi^2 (7078 km^2). Two of the major stressors in this watershed are excessive nutrient loading and thermal pollution, both of which threaten the warm and cold-water fisheries and other aquatic life in the system (U'Ren 2002). A comprehensive watershed management plan has been produced by AWRI (U'Ren 2002), which includes a number of recommendations to help reduce the impacts of these stressors and restore ecosystem structure and function in this watershed, including (1) the development of a Muskegon River Watershed I&E strategy by the Muskegon Conservation District, which

lists the key target audiences, and how to develop and distribute effective messages to these audiences; (2) the identification of critical areas in the watershed---AWRI used GIS to identify those areas most sensitive to environmental stress, as determined by in-stream temperature fluctuation, surface water runoff, and percent of developed land use (agriculture and urban); and (3) the designation and implementation of best management practices (BMPs) that are tailored to the specific needs of individual sites.

For watershed restoration projects in the Great Lakes, such as the Muskegon River Watershed, to have success in the long-run, it is clear that certain elements must be in place. First, GIS technology must be utilized to synthesize the geographic, green infrastructure, and grey infrastructure information available in order to identify critical regions with the watershed. Second, on-the-ground inventories are necessary to select the optimal sites for BMP implementation. Third, sound science is needed to reduce the uncertainty associated with management decisions and to establish cause and effect relationships between environmental stressors/pollutants and societal values in the watershed. Fourth, a defensible monitoring program must be implemented to establish baseline conditions and to assess the effectiveness of restoration efforts. Finally, information, education, and outreach activities must be initiated and sustained throughout the watershed.

What are the needs and challenges to move forward with a restoration effort in the Great Lakes Basin?

Although the Everglades restoration plan provides an important and useful example for undertaking large-scale ecosystem restoration projects, there are fundamental differences in the needs and challenges facing restoration efforts in the Great Lakes compared to a system such as the Florida Everglades. The Everglades restoration involves only one state and focuses primarily on the hydrology of the ecosystem. In contrast, ecosystem restoration in the Great Lakes involves two provinces, eight states, multiple tribes, and must focus on numerous stressors. Hence, the needs and challenges for developing and implementing an effective and comprehensive Great Lakes Ecosystem Restoration Plan are significant.

A considerable amount of literature is devoted annually to the status of the Great Lakes, and there is no need to repeat it here. Arguably, the major threats to the Great Lakes ecosystem include the following:

- Invasive species
- Contaminated sediments
- Water quality
- Water quantity
- Land use change
- Climate change

Below, I briefly discuss each of these threats.

Invasive Species: In aquatic ecosystems, the Great Lakes have served as the poster child for invasive species (Ricciardi and MacIsaac 2000, Vanderploeg et al. 2002); impacts include habitat loss, food chain disruption, and alterations to native fisheries. It is now estimated that since the 1800s, approximately 170 species have invaded the Great Lakes ecosystem. The economic costs are staggering, with estimates of ~$10 million per year being spent on sea lamprey control, and ~$100 to $400 million per year for zebra mussel control and mitigation in the Great Lakes basin.

Contaminated Sediments: Both lake and river sediments throughout the Great Lakes are contaminated with toxic metals and organic chemicals. Polluted sediments are the largest major source of contaminants to the Great Lakes food chain, and over 97% (8,325 km) of the shoreline is considered impaired (USEPA 1999). The Region V sediment inventory contains 346 contaminated sediment sites. Contaminated sediments result in restrictions and delays in the dredging of navigable waterways because they have to be placed in some form of confined disposal facility. This has obvious negative implications for local and regional economies. Of the ~ 15 million cubic meters of sediments dredged for navigational purposes from 1990 – 1995 in the Great Lakes region, 51% had to be placed in some form of confined disposal facility due to high contaminant levels.

Water Quality: Although the Clean Water Act had a dramatic impact on reducing the cultural eutrophication of the Great Lakes and its connecting waters, water quality impairment is still a problem in the region. In particular, agricultural runoff (from row crop and pasture fields), stormwater runoff (from residential and urban areas), commercial fertilizer applications, and runoff from animal waste (from agricultural, natural, and residential sources) contribute to the water quality problems in the region. Land use changes (see below) potentially exacerbate impaired water quality.

Water Quantity: The Great Lakes cover about 95,000 mi^2 and supply ~18% of the planet's surface freshwater and ~90% of the U.S. surface freshwater. Despite this apparent abundance of freshwater, water quantity is an issue in certain regions of the Great Lakes basin. Groundwater withdrawals are resulting in potential ecological impacts due to surface-groundwater connections (cf. Steinman et al. 2004).

Studies by the United States Geological Survey in southeastern Wisconsin confirm the implications of groundwater withdrawal (http://wi.water.usgs.gov/glpf/index.htm). Groundwater that once flowed toward Lake Michigan is now intercepted by pumping and diverted west, toward the Mississippi River Basin. Thus, compared to predevelopment, pumping in this area has reduced the amount of groundwater that flows directly to Lake Michigan across the coastline or that flows indirectly to it as part of river discharge. Some of this diverted water is eventually returned to the Lake through sewers and water-treatment plants, but the location, timing, and quality of the return flow is different than what it was under natural conditions, which can have profound ecological implications (cf. Baron et al. 2002). Given the overall hydrologic budget for Lake Michigan, the absolute reduction in lake-bound groundwater discharge due to pumping is very small. However, it may have serious implications for the local ecology and economy.

Land Use Change: Changing land use patterns are having a dramatic impact on the natural resources in the Great Lakes region. This is particularly true along the Great Lakes coastlines, where the natural beauty of the lakeshore is attracting more and more people. The land cover/land use changes in the Mona Lake Watershed, a small watershed (48,000 acres) in west Michigan that drains directly to Lake Michigan, is representative of many of the trends seen throughout the Great Lakes basin: between 1978 and 1998, there have been increases in residential, commercial, and open field coverages, and declines in the amount of cropland, pasture, and forest; Steinman et al. 2003). As urban sprawl grows throughout the region, increased pressures are being placed on aquatic ecosystems because of more impervious surfaces, the draining or filling of wetlands, more withdrawal of groundwater supplies, and greater density of septage systems.

This problem has been recognized in the state of Michigan. A bipartisan Land Use Leadership Council was formed in 2003 to minimize the negative impacts of current and projected land use patterns on the state's economy and environment. The final report identified more than 160 recommendations (final report available at http://www.michiganlanduse.org/finalreport.htm).

Climate Change: A recent report (Kling et al. 2003) notes that available data strongly indicate the climate of the Great Lakes region already is changing: winters are getting shorter in duration; annual average air temperatures are increasing; duration of lake ice cover is declining; and heavy rainstorms are becoming more common. Climate models predict that by the end of the 21st century, winter temperatures will increase by 5 to 12°F (3 to 7°C) in winter, and by 5 to 20°F (3 to 11°C) in summer. If model predictions are accurate, this means that a Michigan summer today will feel equivalent to what summer currently is like in Arkansas. These climate-induced environmental impacts influence the economic, social, and human health sectors, as well (Kling et al. 2003).

Needs and Challenges: Each of the six threats described above has a unique set of needs and challenges. A comprehensive restoration plan would address each of them, and any others that should be included, through an appropriate vetting process that includes the appropriate experts and public input. However, there are common needs and challenges that bind each of these threats:

Needs:

- A comprehensive, coordinated monitoring plan that addresses the major stressors to the Great Lakes, and which will be used both to establish and refine baseline conditions and to assess future trends
- Effective information and education strategies that engage all sectors of the public in the restoration process
- Funding: this will be an expensive process, and it must be based on a long-term, dedicated funding stream

Challenges:

- Avoidance of turf battles: given the number of parties already established in the region, it will be a tremendous challenge to foster a cooperative, collaborative environment
- Knowledge management: there is a wealth of information currently being generated in the Great Lakes basin. Much of it is coordinated, but much of it is not. Major challenges associated with this issue include (1) prioritizing what information is most essential for the restoration effort (conceptual models can help kick-start this process); (2) developing and implementing the appropriate database management system; and (3) maintaining and updating the database.
- Finding and maintaining the necessary funds

Summary

The Great Lakes ecosystem provides an enormous number of services and functions to the region. It is currently facing a variety of stresses and pressures, which should be addressed through a comprehensive, coordinated ecosystem restoration plan. Although ecosystem restoration is still far from being an exact science, there are certain elements whose inclusion are strongly recommended in order to ensure the greatest chance of success. These include involving the public in a substantive way, basing restoration activities on sound science, being inclusive during plan development and implementation, retaining a flexible approach, and building accountability into the process.

I hope that the examples and lessons learned presented here, which are based on my personal experience and that of many other dedicated people, will help place this issue in a broader and more pragmatic context, and be of use to you and the committee. Thank you again for the invitation to appear today.

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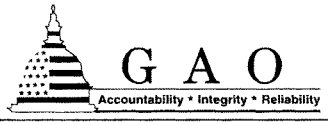
GREAT LAKES

A Comprehensive Strategy and Monitoring System Are Needed to Achieve Restoration Goals

Statement of John B. Stephenson, Director
Natural Resources and Environment



GAO-04-782T

May 21, 2004

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Highlights

Highlights of GAO-04-782T, a testimony before Subcommittee on Water Resources and Environment, Committee on Transportation and Infrastructure, House of Representatives

GREAT LAKES

A Comprehensive Strategy and Monitoring System Are Needed To Achieve Restoration Goals

Why GAO Did This Study

The five Great Lakes, which comprise the largest system of freshwater in the world, are threatened on many environmental fronts. To address the extent of progress made in restoring the Great Lakes Basin, which includes the lakes and surrounding area, GAO (1) identified the federal and state environmental programs operating in the basin and funding devoted to them, (2) evaluated the restoration strategies used and how they are coordinated, and (3) assessed overall environmental progress made in the basin restoration effort.

What GAO Recommends

GAO recommended in its April 2003 report that the Administrator, Environmental Protection Agency

- ensure that the Great Lakes National Program Office fulfills its coordination responsibilities and develop an overarching Great Lakes strategy; and
- develop environmental indicators and a monitoring system for the Great Lakes Basin that can be used to measure overall restoration progress.

EPA generally agreed with GAO's conclusions that better planning, coordination, monitoring and the development of indicators are needed, and stated it would provide a formal response to the report recommendations at a later date. As of May 2004, it has not yet provided this response.

www.gao.gov/cgi-bin/getrpt?GAO-04-782T.

To view the full product, including the scope and methodology, click on the link above. For more information, contact John B. Stephenson at (202) 512-3841 or stephensonj@gao.gov.

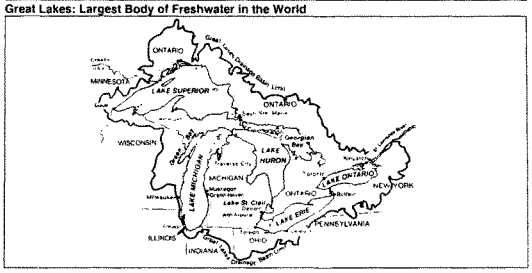
What GAO Found

There are 148 federal and 51 state programs funding environmental restoration activities in the Great Lakes Basin. Most of these programs are nationwide or statewide programs that do not specifically focus on the Great Lakes. However, GAO identified 33 federal Great Lakes specific programs, and 17 additional unique Great Lakes specific programs funded by states. Although Great Lakes funding is not routinely tracked for many of these programs, we identified a total of about $3.6 billion in basin-specific projects for fiscal years 1992 through 2001.

Several disparate Great Lakes environmental strategies are being used at the binational, federal, and state levels. Currently, these strategies are not coordinated in a way that ensures effective use of limited resources. Without such coordination it is difficult to determine the overall progress of restoration efforts. The Water Quality Act of 1987 charged EPA's Great Lakes National Program Office with the responsibility for coordinating federal actions for improving Great Lakes' water quality; however, the office has not fully exercised this authority to this point.

With available information, current environmental indicators do not allow a comprehensive assessment of restoration progress in the Great Lakes. Current indicators rely on limited quantitative data and subjective judgments to determine whether conditions are improving, such as whether fish are safe to eat. The ultimate success of an ongoing binational effort to develop a set of overall indicators for the Great Lakes is uncertain because it relies on the resources voluntarily provided by several organizations. Further, no date for completing a final list of indicators has been established.

Great Lakes: Largest Body of Freshwater in the World



Sources: National Oceanic and Atmospheric Administration and GAO.

Mr. Chairman and Members of the Subcommittee:

We are pleased to be here today to discuss our work on environmental restoration activities in the Great Lakes Basin. The Great Lakes represent the largest system of freshwater in the world and a natural resource that is threatened on many environmental fronts. To protect this resource and to address common water quality problems, the United States and Canada entered into the bilateral Great Lakes Water Quality Agreement (GLWQA) in 1972. However, today, more than 3 decades since the original agreement, beaches are frequently closed to swimmers due to pollution, fish are unsafe to eat for high risk individuals, and raw sewage is still being dumped into the lakes. Recently discovered conditions such as the reemergence in Lake Erie of a "dead zone"—an area that has no dissolved oxygen and therefore cannot support aquatic life—have renewed concerns about the overall ecological health of the Great Lakes.

Progress has been made on a number of significant fronts, including controlling the nonnative sea lamprey, reducing the water's phosphorus content, and improving fish populations, but much more remains to be accomplished before the overall goals of the agreement can be met. Several recently released reports, including ours, have questioned whether the current environmental activities in the Great Lakes being funded by numerous organizations and various programs have resulted in significant restoration progress in the basin, or even if they are adequate to fulfill the U.S. commitments under the Agreement. In 2002, we reported that the Environmental Protection Agency (EPA) needed to take action to improve its oversight for cleaning up specifically designated contaminated areas.[1]

My testimony today is based on our April 2003 report[2] prepared at the request of 14 members of Congress' Great Lakes Task Force. Specifically, GAO was asked to (1) identify the federal and state environmental programs operating in the Great Lakes Basin and the funding being devoted to them, (2) evaluate how the restoration strategies are used and

[1]U.S. General Accounting Office, *Great Lakes: EPA Needs to Define Organizational Responsibilities Better for Effective Oversight and Cleanup of Contaminated Areas*, GAO-02-563 (Washington, D.C.: May 17, 2002).

[2]U.S. General Accounting Office, *Great Lakes: An Overall Strategy and Indicators for Measuring Progress Are Needed to Better Achieve Restoration Goals*, GAO-03-515 (Washington, D.C.: April 30, 2003).

coordinated, and (3) assess overall environmental progress made in the basin restoration efforts thus far.

In summary, Mr. Chairman, we found the following:

- There are 148 federal and 51 state programs funding environmental restoration activities in the Great Lakes Basin. Most of these are nationwide or statewide programs that do not specifically focus on the Great Lakes, but do fund projects that contribute to basin cleanup. We could not determine the total Great Lakes-specific funding contributions from these programs because funds are not typically tracked for specific areas like the basin. However, based on partial information available from 11 federal agencies and seven of the eight Great Lakes states, we determined for these nationwide or statewide programs that at least $1.8 billion in federal funding, and $461.3 million in state funding went to basin-related projects in fiscal years 1992 through 2001. The remaining programs, 33 federal and 17 state, which focus specifically on restoration activities in the Great Lakes Basin, spent about $387 million and $956 million, respectively, in fiscal years 1992 through 2001.

- The numerous restoration programs operating in the Great Lakes Basin employ a variety of environmental strategies at the binational, federal, and state levels to address specific environmental problems, but there is no overarching plan for coordinating these disparate strategies and program activities into a coherent approach for attaining overall basin restoration goals. Without such a plan for the basin, it is difficult to determine overall progress and ensure that limited resources are being effectively utilized. Other large-scale ecosystem restoration efforts, such as the ones for the Chesapeake Bay and the South Florida ecosystem, have demonstrated the importance of having a comprehensive strategic plan with clearly articulated goals, objectives, and criteria for measuring success and a decision-making body for weighing the merits of, and prioritizing funding for, proposed cleanup and restoration projects.

- The absence of a unified Great Lakes restoration effort stems, in part, from the lack of an effective, authoritative organizational entity for planning, monitoring, and establishing funding priorities. The Water Quality Act of 1987 charged EPA's Great Lakes National Program Office (GLNPO), with the responsibility for coordinating federal actions for improving Great Lakes' water quality. However, GLNPO has not fully exercised this authority. For example, it has not entered into agreements with other agency organizations regarding their restoration responsibilities as required by the Clean Water Act.

- Additionally, the lack of consistent, reliable information and measurement indicators makes it impossible to comprehensively assess restoration progress in the Great Lakes Basin. While the Great Lakes Water Quality Agreement long ago called for the development and implementation of a monitoring system, this requirement has not yet been met. Furthermore, any effort to develop indicators must rely on limited quantitative data and subjective judgments to determine whether conditions are improving. In 1996, a binational effort was initiated to develop a set of overall indicators for the Great Lakes through a series of biennial conferences, but the ultimate success of this effort, which relies on the volunteer contributions of several organizations, is uncertain.

To improve coordination and help ensure that funds are effectively spent, we recommended that the Administrator, Environmental Protection Agency (1) charge GLNPO with the responsibility for developing an overarching Great Lakes strategy with specific goals and priorities for evaluating and funding alternative projects, (2) submit a proposal to Congress for funding the plan, and (3) develop environmental indicators and a monitoring system that can be used to measure overall restoration progress. EPA generally agreed with our conclusions but stated that it would provide a formal response to our recommendations at a later date. However, over 1 year has past and EPA has not provided us with its formal response.

Background

The Great Lakes Basin is a large area that extends well beyond the five lakes proper to include their watersheds, tributaries, connecting channels, and a portion of the St. Lawrence River. The basin encompasses nearly all of the state of Michigan and parts of Illinois, Indiana, Minnesota, New York, Ohio, Pennsylvania, Wisconsin, and the Canadian province of Ontario. The lakes form the largest freshwater system on earth, accounting for 20 percent of the world's fresh surface water and over 95 percent of the U.S. fresh surface water supply for the contiguous 48 states.

Millions of people in the United States and Canada rely on the five Great Lakes—Superior, Michigan, Erie, Huron, and Ontario—as a principal source of their drinking water, recreation, and economic livelihood. Over time, industrial, agricultural, and residential development on lands adjacent to the lakes have seriously degraded the lakes' water quality, posing threats to human health and the environment, and forcing restrictions on activities, such as swimming and fish consumption.

To protect the Great Lakes Basin and to address water quality problems, the governments of the United States and Canada entered into the bilateral Great Lakes Water Quality Agreement in 1972. In the agreement, the United States and Canada agreed to restore and maintain the chemical, physical, and biological integrity of the Great Lakes Basin. A new agreement with the same name was reached in 1978, and amended in 1983 and 1987. The agreement prescribes prevention and cleanup measures to improve environmental conditions in the Great Lakes. The agreement obligates the International Joint Commission (IJC), an international body, to assist and to report on the implementation of the agreement.

The Clean Water Act directs EPA to lead efforts to meet the goals of the Great Lakes Water Quality Agreement and establishes GLNPO within EPA, charging it with, among other things, cooperating with federal, state, tribal, and international agencies to develop action plans to carry out the U.S. responsibilities under the agreement. GLNPO is further responsible for coordinating the agency's actions both in headquarters and in the regions to improve Great Lakes' water quality. In addition to GLNPO, numerous federal, state, binational, and nonprofit organizations conduct activities that focus on improving the overall Great Lakes Basin environment or some specific environmental issue within the basin.

Many Federal and State Programs Fund Restoration Activities in the Great Lakes Basin

About 200 programs—148 federal and 51 state—fund restoration activities within the Great Lakes Basin. Most of these programs, however, involve the localized application of national or state environmental initiatives and do not specifically focus on basin concerns. Officials from 11 federal agencies identified 115 of these broadly scoped federal programs, and officials from seven of the eight Great Lakes states identified 34 similar state programs. EPA administers the majority of the federal programs that provide a broad range of environmental activities involving research, cleanup, restoration, and pollution prevention. For example, EPA's nationwide Superfund program funds cleanup activities at contaminated areas throughout the basin. While these broadly scoped federal and state programs contribute to basin restoration, program officials do not track or try to isolate the portion of funding going to specific areas like the basin, making it difficult to determine their contribution to total Great Lakes spending. However, basin-specific information was available on some of these programs. Specifically, basin related expenditures for 53 of the 115 broadly scoped federal programs totaled about $1.8 billion in fiscal years 1992 through 2001. Expenditures for 14 broadly scoped state funded programs totaled $461.3 million during approximately the same time period.

Several federal and state programs were specifically designed to focus on environmental conditions across the Great Lakes Basin. Officials from seven federal agencies identified 33 Great Lakes-specific programs that had expenditures of $387 million in fiscal years 1992 through 2001. Most of these programs funded a variety of activities, such as research, cleanup, or pollution prevention. An additional $358 million was expended for legislatively directed Corps of Engineers projects in the basin, such as a $93.8 million project to restore Chicago's shoreline. Officials from seven states reported 17 Great Lakes specific programs that expended about $956 million in 1992 through 2001, with Michigan's programs accounting for 96 percent of this amount. State programs focused on unique state needs, such as Ohio's program to control shoreline erosion along Lake Erie, and Michigan's program to provide bond funding for environmental activities.

Besides federal and state government agencies, other organizations, such as foundations, fund a variety of restoration activities in the Great Lakes Basin by approving grants to nonprofit and other organizations. Other governmental and nongovernmental organizations fund restoration activities. For example, individual municipalities, township governments, counties, and conservation districts are involved in various restoration activities.

The Lack of a Coordinated, Overarching Strategic Plan Has Impeded Restoration Efforts

Restoration of the Great Lakes Basin is a major endeavor involving many environmental programs and organizations. The magnitude of the area comprising the basin and the numerous environmental programs operating within it require the development of one overarching strategy to address and manage the complex undertaking of restoring the basin's environmental health. The Great Lakes region cannot hope to successfully receive support as a national priority without a comprehensive, overarching plan for restoring the Great Lakes. In lieu of such a plan, organizations at the binational, federal, and state levels have developed their own strategies for the Great Lakes, which have inadvertently made the coordination of various programs operating in the basin more challenging.

The Great Lakes Basin needs a comprehensive strategy or plan similar to those developed for other large ecosystem restoration efforts, such as the ones for the South Florida ecosystem and the Chesapeake Bay. In South Florida, federal, state, local and tribal organizations joined forces to participate on a centralized task force formalized in the Water Resource Development Act of 1996. The strategic plan developed for the South

Florida ecosystem by the task force made substantial progress in guiding the restoration activities. The plan identifies the resources needed to achieve restoration and assigns accountability for specific actions for the extensive restoration effort estimated to cost $14.8 billion. The Chesapeake Bay watershed also has an overarching restoration strategy stemming from a 1983 agreement signed by the states of Maryland, Virginia, and Pennsylvania; the District of Columbia; the Chesapeake Bay Commission; and EPA. This agreement was the basis for a program to protect and restore this ecosystem. The implementation of this strategy has resulted in improvements in habitat restoration and aquatic life, such as increased forested buffer zone and shad population.

Several organizations have developed strategies for the basin at the binational, federal, or state levels that address either the entire basin or the specific problems in the Great Lakes. EPA's *Great Lakes Strategy 2002*, developed by a committee of federal and state officials, is the most recent of these strategies. While this strategy identified restoration objectives and planned actions by various federal and state agencies, it is largely a description of existing program activity relating to basin restoration. State officials told us that the states had already planned the actions described in it, but that these actions were contingent on funding for specific environmental programs. The strategy included a statement that it should not be construed as a commitment for additional funding or resources, and it did not provide a basis for prioritizing activities. In addition, we identified other strategies that addressed particular contaminants, restoration of individual lakes, or cleanup of contaminated areas. Ad hoc coordination takes place among federal agencies, states, and other environmental organizations in developing these strategies or when programmatic activity calls for coordination.

Other Great Lakes strategies address unique environmental problems or specific geographical areas. For example, a strategy for each lake addresses the open lake waters through Lakewide Management Plans (LaMP), which EPA is responsible for developing. Toward this end, EPA formed working groups for each lake to identify and address restoration activities. For example, the LaMP for Lake Michigan, issued in 2002, includes a summary of the lake's ecosystem status and addresses progress in achieving the goals described in the previous plan, with examples of significant activities completed and other relevant topics. However, EPA has not used the LaMPs to assess the overall health of the ecosystem.

The Binational Executive Committee for the United States and Canada issued its *Great Lakes Binational Toxics Strategy* in 1997 that established

a collaborative process by which EPA and Environment Canada, in consultation with other federal departments and agencies, states, the province of Ontario, and tribes, work toward the goal of the virtual elimination of persistent toxic substances in the Great Lakes. The strategy was designed to address particular substances that bioaccumulate in fish or animals and pose a human health risk.

Michigan developed a strategy for environmental cleanup called the *Clean Michigan Initiative*. This initiative provides funding for a variety of environmental, parks, and redevelopment programs. It includes nine components, including Brownfields redevelopment and environmental cleanups, nonpoint source pollution control, clean water, cleanup of contaminated sediments, and pollution prevention. The initiative is funded by a $675 million general obligation bond and as of early 2003; most of the funds had not been distributed.

Although there are many strategies and coordination efforts ongoing, no one organization coordinates restoration efforts. We found that extensive strategizing, planning, and coordinating have not resulted in significant restoration. Thus, the ecosystem remains compromised and contaminated sediments in the lakes produce health problems, as reported by the IJC.[3]

In addition to the absence of a coordinating agency, federal and state officials cited a lack of funding commitments as a principal barrier impeding restoration progress. Inadequate funding has also contributed to the failure to restore and protect the Great Lakes, according to the IJC biennial report on Great Lakes water quality issued in July 2000.[4] The IJC restated this position in a 2002 report, concluding that any progress to restore the Great Lakes would continue at a slow incremental pace without increased funding.[5] In its 1993 biennial report, the IJC concluded that remediation of contaminated areas could not be accomplished unless government officials came to grips with the magnitude of cleanup costs and started the process of securing the necessary resources.[6] Despite this warning, however, as we reported in 2002, EPA reduced the funding available for ensuring the cleanup of contaminated areas under the

[3]IJC, *Tenth Biennial Report on Great Lakes Water Quality*, (June 29, 2000).

[4]IJC, *Tenth Biennial Report on Great Lakes Water Quality*, (June 29, 2000).

[5]IJC, *Eleventh Biennial Report on Great Lakes Water Quality*, (Sept. 12, 2002).

[6]IJC, *Seventh Biennial Report on Great Lakes Water Quality*, (Dec. 15, 1993).

assumption that the states would fill the funding void. States, however, did not increase their funding, and restoration progress slowed or stopped altogether.[7] Officials for 24 of 33 federal programs and for 3 of 17 state programs reported insufficient funding for federal and state Great Lakes specific programs.

Ultimate responsibility for coordinating Great Lakes restoration programs rests with GLNPO; however, GLNPO has not fully exercised this authority. Other organizations or committees have formed to assume coordination and strategy development roles. The Clean Water Act provides GLNPO with the authority to fulfill the U.S. responsibilities under the GLWQA. Specifically, the act directs EPA to coordinate the actions of EPA's headquarters and regional offices aimed at improving Great Lakes water quality. It also provides GLNPO authority to coordinate EPA's actions with the actions of other federal agencies and state and local authorities for obtaining input in developing water quality strategies and obtaining support in achieving the objectives of the GLWQA. The act also provides that the EPA Administrator shall ensure that GLNPO enters into agreements with the various organizational elements of the agency engaged in Great Lakes activities and with appropriate state agencies. The agreements should specifically delineate the duties and responsibilities, time periods for carrying out duties, and resources committed to these duties. GLNPO officials stated that they do not enter into formal agreements with other EPA offices, but rather fulfill their responsibilities under the act by having federal agencies and state officials agree to the restoration activities contained in the *Great Lakes Strategy 2002*. However, the strategy does not represent formal agreements to conduct specific duties and responsibilities with committed resources. EPA's Office of Inspector General reported the absence of these agreements in September 1999.[8] The report stated that GLNPO did not have agreements as required by the act and recommended that such agreements be made to improve working relationships and coordination.

To improve coordination of Great Lakes activities and ensure that federal dollars are effectively spent, we recommended that the Administrator,

[7]U.S. General Accounting Office, *Great Lakes: EPA Needs to Define Organizational Responsibilities Better for Effective Oversight and Cleanup of Contaminated Areas*, GAO-02-563 (Washington, D.C.: May 17, 2002).

[8]U.S. Environmental Protection Agency, *EPA's Great Lakes Program*, EPA/OIG Rept. 99P00212 (Washington, D.C.: Sept. 1, 1999).

EPA, ensure that GLNPO fulfills its responsibility for coordinating programs within the Great Lakes Basin; charge GLNPO with developing, in consultation with the governors of the Great Lakes states, federal agencies, and other organizations, an overarching strategy that, clearly defines the roles and responsibilities for coordinating and prioritizing funding for projects; and submit a time-phased funding requirement proposal to the Congress necessary to implement the strategy.

The Lack of an Effective Monitoring System Makes it Impossible to Assess Overall Restoration Progress

The Great Lakes Water Quality Agreement, as amended in 1987, calls for establishing a monitoring system to measure restoration progress and assess the degree that the United States and Canada are complying with the goals and objectives of the agreement. However, implementation of this provision has not progressed to the point that overall restoration progress can be measured or determined based on quantitative information. Recent assessments of overall progress, which rely on a mix of quantitative data and subjective judgments, do not provide an adequate basis for making an overall assessment. The current assessment process has emerged from a series of biennial State of the Lakes Ecosystem Conferences (SOLEC)[9] initiated in 1994 for developing indicators agreed upon by conference participants.

Prior to the 1987 amendments to the GLWQA, the 1978 agreement between the two countries also contained a requirement for surveillance and monitoring and for the development of a Great Lakes International Surveillance Plan. The IJC Water Quality Board was involved in managing and developing the program until the 1987 amendments placed this responsibility on the United States and Canada. This change resulted in a significant reduction in the two countries' support for surveillance and monitoring. In fact, the organizational structure to implement the surveillance plan was abandoned in 1990, leaving only one initiative in place—the International Atmospheric Deposition Network (IADN), a network of 15 air-monitoring stations located throughout the basin.

With the surveillance and monitoring efforts languishing, IJC established the Indicators for Evaluation Task Force in 1993 to identify the appropriate framework to evaluate progress in the Great Lakes. In 1996, the task force proposed that nine desired measurements and outcomes be used to develop indicators for measuring progress in the Great Lakes.

[9]SOLEC is co-chaired by representatives from the U.S. EPA and Environment Canada.

Shortly before the task force began its work, the United States and Canada had agreed to hold conferences every 2 years to assess the environmental conditions in the Great Lakes in order to develop binational reports on the environmental conditions to measure progress under the agreement. Besides assessing environmental conditions the conferences were focused on achieving three other objectives, including providing a forum for communication and networking among stakeholders. Conference participants included U.S. and Canadian representatives from federal, state, provincial, and tribal agencies, as well as other organizations with environmental restoration or pollution prevention interests in the Great Lakes Basin. The 1994 SOLEC conference culminated in a "State of the Great Lakes 1995" report, which provided an overview of the Great Lakes ecosystem at the end of 1994 and concluded that overall the aquatic community health was mixed or improving. The same assessment was echoed in the 1997 state of the lakes report. Meanwhile the IJC agreed that the nine desired outcome areas recommended by the task force would help assess overall progress. It recommended that SOLEC, during the conference in 2000, establish environmental indicators that would allow the IJC to evaluate what had been accomplished and what needed to be done for three of the nine indicators—the public's ability to eat the fish, drink the water, and swim in the water without any restrictions.

However, the indicators developed through the SOLEC process and the accomplishments reported by federal and state program managers do not provide an adequate basis for making an overall assessment for Great Lakes restoration progress. The SOLEC process is ongoing and the indicators still being developed are not generally supported by sufficient underlying data for making progress assessments. The number of indicators considered during the SOLEC conferences has been pared down from more than 850 indicators in 1998 to 80 indicators in 2000, although data were available for only 33 of them.

After the SOLEC 2000 conference, IJC staff assessed the indicators supported by data that measured the desired outcomes of swimmability, drinkability, and the edibility of fish in the Great Lakes.[16] Overall, the IJC commended SOLEC's quick response that brought together information regarding the outcomes and SOLEC's ongoing efforts. The IJC, however, recognized that sufficient data were not being collected throughout the Great Lakes Basin and that the methods of collection, the data collection

[16]IJC, *Eleventh Biennial Report on Great Lakes Water Quality*, (Sept. 12, 2002).

time frames, the lack of uniform protocols, and the incompatible nature of some data jeopardized their use as indicators. Specifically, for the desired outcome of swimmability, the IJC concurred that it was not always safe to swim at certain beaches, but noted that progress for this desired outcome was limited because beaches were sampled by local jurisdictions without uniform sampling or reporting methods. At the 2002 SOLEC conference, the number of indicators assessed by conference participants increased from 33 to 45. The IJC expressed concern that there are too many indicators, insufficient supporting backup data, and a lack of commitment and funding from EPA to implement and make operational the agreed upon SOLEC baseline data collection and monitoring techniques. The IJC recommended in its last biennial report in September 2002 that any new indicators should be developed only where resources are sufficient to access scientifically valid and reliable information. The information from the 2002 SOLEC conference culminated in the "State of the Great Lakes 2003" report, which concluded that the chemical, physical, and biological integrity of the basin is mixed based on assessments of 43 indicators. This conclusion was based on five positive signs of recovery, such as persistent toxic substances are continuing to decline, and seven negative signs, such as phosphorous levels are increasing in Lake Erie.

The ultimate successful development and assessment of indicators for the Great Lakes through the SOLEC process are uncertain because insufficient resources have been committed to the process, no plan provides completion dates for indicator development and implementation, and no entity is coordinating the data collection. Even though the SOLEC process has successfully engaged a wide range of binational parties in developing indicators, the resources devoted to this process are largely provided on a volunteer basis without firm commitments to continue in the future. GLNPO officials described the SOLEC process as a professional, collaborative process dependent on the voluntary participation of officials from federal and state agencies, academic institutions, and other organizations attending SOLEC and developing information on specific indicators. Because SOLEC is a voluntary process, the indicator data resides in a diverse number of sources with limited control by SOLEC organizers. GLNPO officials stated that EPA does not have either the authority or the responsibility to direct the data collection activities of federal, state, and local agencies as they relate to surveillance and monitoring of technical data elements that are needed to develop, implement, and assess Great Lakes environmental indicators. Efforts are underway for the various federal and state agencies to take ownership for collecting and reporting data outputs from their respective areas of responsibility and for SOLEC to be sustained and implemented; each

indicator must have a sponsor. However, any breakdown in submission of this information would leave a gap in the SOLEC indicator process.

EPA supports the development of environmental indicators as evidenced by the fact that, since 1994, GLNPO has provided about $100,000 annually to sponsor the SOLEC conferences. Additionally, GLNPO spends over $4 million per year to collect surveillance data for its open-lake water quality monitoring program, which also provides supporting data for some of the indicators addressed by SOLEC. A significant portion of these funds, however, supports the operation of GLNPO's research vessel, the *Lake Guardian*, an offshore supply vessel converted for use as a research vessel. GLNPO also supports activities that are linked or otherwise feed information into the SOLEC process, including the following:

- collecting information on plankton and benthic communities in the Great Lakes for open water indicator development;
- sampling various chemicals in the open-lake waters, such as phosphorus for the total phosphorus indicator;
- monitoring fish contaminants in the open waters, directly supporting the indicator for contaminants in whole fish and a separate monitoring effort for contaminants in popular sport fish species that supports the indicator for chemical contaminants in edible fish tissue; and
- operating 15 air-monitoring stations with Environment Canada comprising the IADN that provides information for establishing trends in concentrations of certain chemicals and loadings of chemicals into the lakes. EPA uses information from the network to take actions to control the chemicals and track progress toward environmental goals.

To better coordinate monitoring activities GLNPO and Environment Canada began developing a web-based inventory of monitoring activities in the Great Lakes Basin. The first workshop on developing this system was held in January 2002. Once development of this system is complete, organizations conducting monitoring activities will be requested to provide descriptive information about these monitoring activities and contact points for obtaining specific monitoring data. We are currently conducting a review for 20 members of Congress serving on the Great Lakes Task Force that further examines monitoring activities in the Great Lakes Basin. In this review we hope to identify some of the major challenges to developing a Great Lakes Basin monitoring system.

Program officials frequently cite output data as measures of success rather than actual program accomplishments in improving environmental conditions in the basin. As a rule, program output data describe activities, such as projects funded, and are of limited value in determining environmental progress. For example, in reporting the accomplishments for Michigan's Great Lakes Protection Fund, officials noted that the program had funded 125 research projects over an 11-year period and publicized its project results at an annual forum and on a Web site. Similarly, the Lake Ontario Atlantic Salmon Reintroduction Program administered by the Department of Interior's Fish and Wildlife Service listed under its accomplishments the completion of a pilot study and technical assistance provided to a Native American tribe.

Of the 50 federal and state programs created specifically to address conditions in the basin, 27 reported accomplishments in terms of outputs, such as reports or studies prepared or presentations made to groups. Because research and capacity building programs largely support other activities, it is particularly difficult to relate reported program accomplishments to outcomes. The federal and state environmental program officials responding to our evaluation generally provided output data or, as reported for 15 programs, reported that the accomplishments had not been measured for the programs.

Only eight of the federal or state Great Lakes-specific programs reported outcome information, much of which generally described how effective the programs' activity or action had been in improving environmental conditions. For example, EPA's Region II program for reducing toxic chemical inputs into the Niagara River, which connects Lake Erie to Lake Ontario, reported reductions in priority toxics from 1986 through 2002 from ambient water quality monitoring. Other significant outcomes reported as accomplishments for the Great Lakes included (1) reducing phosphorus loadings by waste treatment plants and limiting phosphorus use in household detergents; (2) prohibiting the release of some toxicants into the Great Lakes, and reducing to an acceptable level the amount of some other toxicants that could be input; (3) effectively reducing the sea lamprey population in several invasive species infested watersheds; and (4) restocking the fish-depleted populations in some watersheds.

To fulfill the need for a monitoring system called for in the GLWQA and to ensure that the limited funds available are optimally spent, we recommended that the Administrator, EPA, in coordination with Canadian officials and as part of an overarching Great Lakes strategy, (1) develop environmental indicators and a monitoring system for the Great Lakes

Basin that can be used to measure overall restoration progress and (2) require that these indicators be used to evaluate, prioritize, and make funding decisions on the merits of alternative restoration projects.

Mr. Chairman, this completes my prepared statement. I would be happy to answer any questions that you or other members of the Subcommittee may have at this time.

Contacts and Staff Acknowledgements

For further information, please contact John B. Stephenson at (202) 512-3841. Individuals making key contributions to this testimony were Willie Bailey, Greg Carroll, Karen Keegan, Jonathan McMurray, and John Wanska.

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Testimony of Rep. Bart Stupak
House Transportation and Infrastructure Subcommittee on Water Resources and the Environment
Hearing on Great Lakes Health
May 21, 2004

Thank you for allowing me the opportunity to come before this Subcommittee to discuss Great Lakes water quality and restoration efforts. This is a significant issue for me and my constituents in Michigan's first congressional district – which is surrounded by the Great Lakes.

I commend Chairman Duncan and Ranking Member Costello for holding this hearing and for recognizing the importance of the health of the Great Lakes Basin, not only for the region, but for the nation as well.

As the world's largest freshwater body, and source of drinking water for over 30 million people, the restoration of the Great Lakes should be a top priority for both President Bush and for Congress.

Regrettably, nearly a year after its introduction, the bipartisan Great Lakes Restoration and Financing Act remains unfinished business in the 108th Congress. This legislation offers real hope for a solution to the challenge of cleaning up the Great Lakes. It would bring together all the stakeholders – including local, state and Federal officials, as well as business, scientific and advisory groups – to create a Great Lakes Management Plan.

Just as important, it provides the funding to accomplish restoration. It's a smart, bipartisan approach, which is why the bill has garnered 106 cosponsors from both sides of the aisle and it deserves immediate consideration by the House.

That is more than can be said about the Administration's Great Lakes Executive Order announced earlier this week.

Since I was first elected to Congress in 1992, I have seen numerous Great Lakes studies performed. Let's be clear – the last thing we need is another study. We understand the issues that confront us. What we need is action. Yet where action is need, we've been offered excuses. Where funding is needed to actually begin work on restoration, we've been offered more empty words.

There are already recommendations on the table and we need a comprehensive water plan that includes clean-up of toxic hot spots, combat invasive species, restore critical habitat, and ensure the economic sustainability of the Lakes.

The President's Executive Order doesn't provide one dollar to begin work. The General Accounting Office (GAO) has found that numerous strategizing, planning and coordinating efforts have failed to result in extensive Great Lakes restoration activity just for this reason – because there was no money to implement those recommendations.

I would also like to point out that the moratorium on new oil and gas drilling in the Great Lakes is set to expire at the end of this fiscal year. It is essential to extend the moratorium in order to continue to protect the health of the Lakes and prevent further damage to this already endangered national treasure.

Another threat to the Great Lakes that we haven't touched on is water diversion. For the last 12 years I have worked to prevent the export of our freshwater outside of the region.

While we are waiting for Annex 2001— an initiative to establish a basin-wide standard for water withdrawal put forth by the 8 Great Lakes Governors – to come to fruition, the Nestle Water bottling plant in my district is on track to divert over 130 million gallons of water this year.

With global water demand doubling every 21 years, we need to protect Great Lakes water resources from being depleted by diverting our water to thirsty regions.

We need to start putting our money where our mouth is and fund the clean-up of the Great Lakes, continue the moratorium on drilling, and put a stop to water diversion.

Thank you.

Canadian Embassy Ambassade du Canada

501 Pennsylvania Avenue, NW
Washington, DC 20001

June 21, 2004

The Honourable John J. Duncan, Jr., Chair
Subcommittee on Water Resources and Environment
Committee on Transportation and Infrastructure
2165 Rayburn House Office Building
Washington, DC 20515

Dear Representative Duncan:

I understand that the House Transportation and Infrastructure Subcommittee on Water Resources and Environment held oversight hearings on Great Lakes water quality and restoration on May 20/21. I would like to thank you for your interest in the Great Lakes, which are very important to Canada and the millions of Canadians for whom they are the principal source of drinking water. We have worked hard, both domestically and in cooperation with the United States, to achieve the shared objectives outlined in the Great Lakes Water Quality Agreement (GLWQA). Within Canada, we have completely cleaned up two Areas of Concern, and are well on the way to completion of the others on the Canadian side.

In view of the different approaches taken by our countries to achieve shared objectives, and the interest you have shown, I would like to bring to your attention the attached statement. This document outlines Canada's approach to the Great Lakes, both domestic (in cooperation with the Province of Ontario) and bilateral (with the United States through the GLWQA). I respectfully request that my letter and the statement be included in the hearing record.

Your sincerely,

Peter M. Boehm
Minister, Political and Public Affairs

c.c.
Representative Don Young, Chair, Transportation and Infrastructure
Representative James L. Oberstar, Ranking Minority Member, Full Committee
Representative Jerry F. Costello, Ranking Minority Member, Subcommittee

Canada

WRITTEN SUBMISSION
ON BEHALF OF
THE GOVERNMENT OF CANADA
TO THE SUBCOMMITTEE ON WATER RESOURCES AND THE ENVIRONMENT
COMMITTEE ON TRANSPORTATION AND INFRASTRUCTURE
U.S. HOUSE OF REPRESENTATIVES
REGARDING
THE GREAT LAKES

BACKGROUND

Containing approximately one fifth of the world's total surface fresh water, the Great Lakes basin is the world's largest fresh water ecosystem. The basin supports a Canadian population of more than 9.2 million, approximately one third of the total Canadian population, and the Lakes are a source of drinking water for approximately 8 million Canadians. Economically, the basin supports key Canadian industrial and agriculture sectors and it is a vital transportation route through which billions of dollars in Canada-United States trade flows.

As a resource shared between two countries, eight states, one province and numerous local governments, tribes, First Nations and communities, the effective management of the Great Lakes requires implementing common objectives and undertaking actions in a cooperative and coordinated manner. The waters of the Great Lakes do not recognize political boundaries; environmental problems in one jurisdiction can have significant effects on other areas in the system and on the environmental quality of the Great Lakes as a whole.

GREAT LAKES WATER QUALITY AGREEMENT

The Canada-U.S. partnership in the Great Lakes draws strength from a very simple reality: two nations, one shared ecosystem and the recognition that the protection of the waters of the Great Lakes is vital for the health and economic prosperity of citizens on both sides of the border.

Canada and the U.S. share a long history of effective cooperation on water-related environmental issues that stretches back almost a century. The Boundary Waters Treaty (1909) set the pattern of Canada-U.S. environmental relations by establishing the principle of joint stewardship of the rivers and lakes that lie along or flow across the Canada-U.S. border.

In the Great Lakes, the framework for binational partnership was further enhanced in 1972 with the signing by Canada and the U.S. of the first Great Lakes Water Quality Agreement. The Agreement marked a commitment from both countries to restore and protect the Great Lakes basin ecosystem. It created the shared vision for binational cooperation and coordination and articulated that both Canada and the U.S. are working towards achieving the same goals.

The Agreement also established a clear decision-making and accountability framework. This framework facilitates joint study by Canadian and American experts drawn from government, industry and academia. This process of joint study enables the Parties to investigate and reach

agreement on the facts of an issue. More importantly, it serves to develop a solid foundation upon which governments on both sides of the border can work jointly at developing practical and pragmatic solutions.

The binational vision and framework of coordination and cooperation is very important, given the number of jurisdictions on both sides of the border that play a role in ensuring that progress is made in restoring and maintaining the Great Lakes Basin ecosystem. Consequently, the Great Lakes Water Quality Agreement is key to our continued success.

BINATIONAL INSTITUTIONS

Under Article X of The Great Lakes Water Quality Agreement, the Governments of Canada and the U.S., in cooperation with State and Provincial Governments, are required to meet twice a year to coordinate their respective work plans with respect to implementation under the Agreement and to evaluate progress in meeting the objectives of the Agreement.

To meet this requirement, the Governments of Canada and the U.S. established the Binational Executive Committee (BEC), which is comprised of senior level representatives from Canadian and U.S. federal, state and provincial agencies that are responsible for delivering environmental and natural resource programs in the Great Lakes basin ecosystem. The BEC has been instrumental in coordinating and managing Great Lakes programs on a binational basis. The BEC meets twice a year and its work includes: setting priorities and strategic direction for binational programming in the Great Lakes; coordinating binational programs and activities; responding to new and emerging issues in the Great Lakes, including tasking existing or creating new working groups to undertake designated activities; providing input on the evaluation of progress under the Great Lakes Water Quality Agreement; and providing advice, comment or other input for the preparation of various binational reports.

Current BEC priorities include: Binational Areas of Concern (AOCs); Lakewide Management Plans (LaMPs); the Binational Toxics Strategy (BTS); the Integrated Atmospheric Deposition Network (IADN); and the State of the Lakes Ecosystem Conference (SOLEC) and reporting. The BEC has recently endorsed a number of new initiatives including: the development of the Lake Huron Binational Partnership for the management and coordination of programs and clean up of Lake Huron and the establishment of a Great Lakes Human Health Network.

In the area of monitoring, the BEC approved the development of a binational, basin wide inventory of Great Lakes monitoring programs and committed to supporting the Cooperative Monitoring approach in order to improve the coordination of binational monitoring in the Great Lakes. This approach focuses on coordinating monitoring and research, and promoting the sharing of data, information, expertise and technology among agencies.

Binational Lakewide Management Plans have been developed for Lakes Superior, Erie and Ontario pursuant to the Great Lakes Water Quality Agreement. These plans are coordinated by federal, state and provincial governmental agencies in Canada and the U.S. Under agency guidance, the LaMPs unite a network of stakeholders in activities to restore and protect the lakes.

The LaMPs, moreover, provide an action plan for achieving common goals and restoring the lakes for present and future generations. Through the formation of binational management processes, ecosystem objectives are established for each Great Lake and research, monitoring, programs and other activities are coordinated.

These binational efforts have been successful in improving the environmental quality of the Great Lakes. The overall contaminant picture in the Great Lakes has dramatically improved, with significant declines in overall concentrations of most critical contaminants. Some bird species, such as the bald eagle and peregrine falcon, are beginning to return and nest successfully in the Great Lakes basin. Fish communities are improving, with species such as the Lake Trout showing signs of recovery in most of the Great Lakes.

CANADIAN MANAGEMENT

The Canadian Great Lakes Program is a highly partnered, horizontal program that coordinates not only Canadian activities undertaken with U.S. federal and state agencies, but also the actions of agencies within the Government and joint activities by the Governments of Canada and the Province of Ontario.

At the federal level, the Government of Canada's Great Lakes Action Plan (first launched in 1989) coordinates the actions of eight federal government departments by establishing a framework for ensuring that each department meets its responsibilities under the Great Lakes Water Quality Agreement.

The Canada-Ontario Agreement respecting the Great Lakes Basin Ecosystem (COA), first signed in 1971, facilitates the efforts between the Governments of Canada and Ontario. The 2002 version of COA, renews and strengthens planning, cooperation and coordination between federal and provincial departments in implementing the COA vision of a healthy, prosperous and sustainable Great Lakes Basin Ecosystem. In combination, the Action Plan and COA assist the Government of Canada in meeting its obligations under the Great Lakes Water Quality Agreement.

Under this domestic framework, the Governments of Canada and Ontario have been able to delist two Areas of Concern (AOCs) under the Great Lakes Water Quality Agreement: Collingwood in 1984 and Severn Sound in 2003. Of the remaining ten AOCs entirely on the Canadian side, Spanish Harbour is now an Area in Recovery, and work is near completion in four other areas. These successes over the last 30 years have come at a time when the population in the Ontario portion of the Great Lakes Basin has more than doubled.

CONCLUSION

The challenge in managing the shared waters of the Great Lakes is to establish how we can continue to move forward in Canada and the U.S. in restoring and protecting the Great Lakes Basin ecosystem, particularly as new and diverse challenges arise. The Government of Canada

believes that a binational vision and framework of cooperation and coordination is key both to our continued success and to addressing new challenges.

As we continue to take action on each side of the border, we must remember that the protection of the Great Lakes does not stop at national boundaries, and that we must continue to work together towards a common vision and shared objectives, using the existing binational institutional mechanisms established under the Great Lakes Water Quality Agreement. Canada believes it is important that this be recognized in restoration plans in Canada and the U.S., and in any new initiatives. We welcome the announcement by the Environmental Protection Agency of the Great Lakes Interagency Task Force, established to improve coordination among U.S. agencies responsible for clean up programs in the Great Lakes, in collaboration with the Government of Canada.

With the upcoming review of the Great Lakes Water Quality Agreement, the Governments of Canada and the U.S., together with States, Provinces, local governments, tribes, First Nations and community partners, have an opportunity to examine our progress under the Agreement and to continue to build on the strengths of our existing binational vision and framework of cooperation, collaboration and coordination. We look forward to working with the U.S. on a comprehensive and transparent process, to commence officially later this year.

Protecting The Environment •
Improving Water Quality

Kevin L. Shafer, P.E.
Executive Director

Testimony by Kevin Shafer
for Great Lakes Initiative

Mr. Chairman, Congressman Costello, I am Kevin Shafer, Executive Director of the Milwaukee Metropolitan Sewerage District or MMSD. MMSD is a Wisconsin State chartered governmental agency that provides wastewater and flood management services to the Greater Milwaukee, Wisconsin area. Thank you for considering my testimony on behalf of the families in the region MMSD services.

The Greater Milwaukee Watersheds encompass 1,094 square miles of land and water in the State of Wisconsin, with boundaries that include all of Milwaukee County and all or part of ten municipalities in the surrounding counties of Ozaukee, Washington, Waukesha and Racine, and is bordered by Lake Michigan to the east.

MMSD is using a Watershed Protection Approach as recommended in the late 1990s by the U.S. Environmental Protection Agency as the best way to conduct water resources planning for our Facility Plan for the year 2020. The Greater Milwaukee Watersheds Initiative is a comprehensive planning process used to protect public health and the environment by preventing pollution of area waterways and enhancing the quality of area water resources.

Despite our best efforts, MMSD is confronting issues of concern to many Great Lakes communities including aging infrastructure, sanitary sewer systems that are inundated during heavy rain events, and inflow and infiltration during heavy rain events. Each of these infrastructure issues contribute to releases of rainwater mixed with untreated wastewater. This contamination ultimately ends up in Lake Michigan.

MMSD, residents of the Greater Milwaukee Watersheds, and public officials are increasingly concerned about the release of raw sewage into the Milwaukee River, the Menomonee River, other regional waterways and Lake Michigan as a result of combined sewer overflows (CSOs) and sanitary sewer overflows (SSOs).

In May 2004, the City of Milwaukee was hit with a series of flood events. This flooding resulted in overflows that released more than 4.6 billion gallons of stormwater mixed with untreated wastewater into Lake Michigan. In addition, the storm caused an inflow and infiltration, picking up contaminants from the flooded region. Although there were no specific threats to the public health as a result of this series of storms, the release of these contaminants into the environment is unacceptable as long-term policy to MMSD and the public.

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The Great Lakes Initiative (GLI) gives communities in the Great Lakes region the opportunity to find and finance solutions to issues like those confronting MMSD and the communities we serve. While we are beginning to tackle these problems, including accelerating the construction of extensions to our deep tunnel systems, we have approximately $2 billion in identified needs over the next two decades to truly control the release of contaminants into Lake Michigan. Solutions vary from controlling waterway development, purchasing green space where natural flooding can occur to building a "catch, treat and release" tunnel system and large flood basins.

Our interim solution to control the amounts of contamination entering our region's waterways is to accelerate construction of our deep tunnel system and to further improve our response during flood events. However, even with these changes, we will still have flooding, and still have releases of wastewater into the environment.

MMSD strongly supports enactment of the GLI authorization and its related funding. We need to ensure that these funds can be used to upgrade Great Lake's region environmental infrastructure so that we continue to have our Great Lakes as a national treasure into the foreseeable future. The purpose of the GLI has been to promote and maintain water quality for those communities fortunate to have the Great Lake's as a resource. MMSD shares in that goal and hopes that as funds are allocated to address the issue of water quality improvement in this region; MMSD will work closely with all parties to find innovative and concrete solutions to reach this end.

The following are key points to assist public officials in communicating the scope of this problem, potential short and long-term solutions to the problem, and the cost of these infrastructure improvements.

1 The Milwaukee Metropolitan Sewerage District is deeply concerned about this contamination in the region's watersheds and is actively working to develop both interim and long-term solutions to respond to these issues. Many of the permanent solutions are contained in already developed multi-year plans, but remain years away from construction due to feasibility and cost concerns. Oversight and support from public officials is welcomed, and a partnership between MMSD and regional representatives is critical if MMSD is to succeed in constructing the infrastructure necessary to prevent future overflows.
2 During the month of May and into the beginning of June 2004, the Greater Milwaukee area and its watersheds were devastated by a series of heavy rain episodes. This rain created resulted in an average of approximately eight inches of rain falling in a three-week period, producing 65 millions of gallons of stormwater in our service area. This compares to an average May rainfall of three inches.
3 At present, the existing storm and wastewater infrastructure in Milwaukee is 10-years old. Unfortunately, any stormwater and wastewater that cannot be captured by the deep tunnel, treated and released ends up as overflow effluent in our region's waterways.

4 Through years of planning and engineering, MMSD has developed short and long-term solutions to address the CSO/SSO issue. Many of these projects, such as the replacement of the Central Metropolitan Interceptor Sewer (Central MIS) and the deep tunnel projects have been underway for years at an ongoing cost to regional users of nearly $.5 billion. Another $1.5 billion in infrastructure needs have been identified for development over a 20-year period.

Proposed Solutions

MMSD is taking the following immediate steps to address the concerns raised by residents of the Greater Milwaukee Watersheds and their municipal, county and federal representatives. These short-term steps include:

1 Accelerating construction of additional deep tunnels to accept and hold additional combined sewer and sanitary sewer overflow.
2 Addressing new technologies to allow for better management of stormwater on the surface before it gets into our sewers.

In addition, long-term solutions to CSOs and SSOs are currently in the planning, engineering or construction phases.

1 Upgrading the Central Metropolitan Interceptor Sewer system to prevent failure of the stormwater and wastewater conveyance system.
2 Constructing flood basins on 90 acres at the Milwaukee County Grounds to accept an additional 260 million gallons of stormwater.
3 Restoring natural habitat, planting stormwater trees, and purchasing "greenways" along river banks to prevent development and enable natural flooding to occur without threatening human life or homes.
4 Continuing work on MMSD's "2020 Facilities Plan," which will be completed by June 30, 2007.
5 Aggressively pursuing long-term financing assistance through state and municipal bonds and through federal grant assistance to support the cost of expanding the infrastructure needed to lessen overflows and to prevent excessive user fees for the Greater Milwaukee watersheds' homeowners.

Thank you.

Kevin L. Shafer, P.E.
Executive Director
Milwaukee Metropolitan Sewerage District

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